| | | | |
|---|---|---|---|
| ERIC Document Resume | See Instruction Sheet | DATE OF RESUME 6/24/65 | DATE RECEIVED |

A. PUBLICATION DATA

| | | | |
|---|---|---|---|
| 1. ERIC NUMBER<br>ED000137 | 2. ORIGINATOR CONTROL NO(S).<br>7475 | 3. IDENTIFICATION NO.<br>N.A. | DO NOT WRITE IN SPACE BELOW |

4. AUTHOR(S): Howell, John J. et al.

5. TITLE OF DOCUMENT ABSTRACTED: Teaching Fellows, An Experimental Program for Recruitment and Preparation of Superior Teachers - The Yale-Fairfield Study of Elementary Teaching

6. PUBLICATION TITLE: N.A.

7. EDITOR(S): N.A.

8. PLACE OF ORIGIN
ORG.
ST. Yale University
CITY, STATE New Haven, Conn.
TELE. EXT.
INST/LCC CODE

9. PUBLISHER OR SOURCE: Yale University

| 10. VOL. | 11. PAGES | 12. MO./YR. | 13. TOTAL PP. |
|---|---|---|---|
| N.A. | N.A. | 60 | 130 |

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TYPE OF REPORT
PROPOSAL ☐
IN-PROGRESS ☐
FINAL ☒
FOLLOW-UP ☐

OTHER ERIC REFERENCES:

ERIC SATELLITE CODE

B. INDEXING DATA

14. SUBJECT AREA

15. TYPE OF ENDEAVOR: experimental study

16. INDEXING TERMS (6-12)

| | | | | |
|---|---|---|---|---|
| | | recruitment | | |
| experimental studies | students | elem. edu. | | |
| professional edu. | talent | work-study programs | | |
| teacher edu. | fellowship programs | programs | | |

17. ABSTRACT (MAX. 250 WORDS)

An experiment in the use of teachers college students as teacher assistants in elementary schools in a program combining work and study and leading to professional certification. This 4-year project was carried on cooperatively with Danbury State College 1955-59. Includes summary and implications, with practical considerations in the implementation of the program.

ERIC No.

18. SOURCE OF ABSTRACT

C. FUNDING DATA

19. SUPPORTING ORGANIZATION

20. DIVISION OR DEPT.

21. CONTRACT NO.

PROJECT NO.

22. TOTAL COST OF PROJECT

23. DURATION OR PROJECT

U.S. Department of Health,
Education, and Welfare
Office of Education

ERIC Form 1

5-16

#7475

HE7475

ED000137

# TEACHING FELLOWS

*An Experimental Program for*
*Recruitment and Preparation of*
*Superior Teachers*

## THE YALE-FAIRFIELD STUDY OF ELEMENTARY TEACHING

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# TEACHING FELLOWS

## *An Experimental Program for Recruitment and Preparation of Superior Teachers*

# THE YALE–FAIRFIELD STUDY OF ELEMENTARY TEACHING

*A cooperative project conducted by Yale University and*
*the Fairfield, Connecticut Public Schools and financed by a*
*grant from the Fund for the Advancement of Education*

Clyde M. Hill, *Director*

*PREPARED BY*

John J. Howell, Constance M. Burns, Clyde M. Hill,
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NEW HAVEN, CONNECTICUT, MAY, 1960

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The eight Fellows on campus at the same time, a rare event.

A seminar in child development given at Fairfield by Dr. Constance Burns.

## 1

# INTRODUCTION: THE YALE–FAIRFIELD STUDY

The Yale–Fairfield Study of Elementary Teaching is primarily concerned with the improvement of instruction in the elementary schools. Obviously, the first step in that direction is the recruitment and preparation of more capable and better equipped teachers, after which these more competent teachers must be provided with opportunities for really effective teaching; their professional competencies must be used to the utmost; their talents must not be deployed so as to force the neglect of the basic function of teaching.

The need for improvement in quality in education at all levels is widely recognized: current public discussion and debate concerning education in this country is largely concentrated upon the problem. The Yale–Fairfield Study of Elementary Teaching proceeds from the premise, founded on the results of many previous studies in the field of elementary education, that an essential requirement for the improvement of quality is the continual recruitment for the teaching profession of people of high ability. There is much evidence, however, that elementary-school teaching compares unfavorably with other career opportunities available to young people of high ability. The first report of the Study[1] includes an extensive review of previous research and also presents new evidence concerning the nature of this problem.

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[1] Yale–Fairfield Study of Elementary Teaching, *Report: 1954–1955* (New Haven, Connecticut: The Study, 1956).

The need for more adequate salaries has long been accepted as one of the most crucial problems of teacher recruitment. Among the many reasons for resistance to higher salaries, however, is the common belief that the functions actually performed by teachers are not, in fact, very difficult, nor such as to require highly developed professional competence like that required in other professions. Among the taxpayers and their elected representatives it is quite generally supposed that any reasonably well-educated person could easily perform the duties of an elementary-school teacher. To this viewpoint there is frequently added the feeling that the results of teaching leave much to be desired. More adequate financial support, therefore, is quite as dependent upon improvement of instruction as improvement of instruction is upon financial support.

Apart from adequate salaries one of the principal problems of inducement to highly capable youth to enter the teaching profession is the nature of the preparation required. Somehow the idea has developed—it is too prevalent to be entirely without foundation—that all courses in education are tedious and inconsequential. The accepted stereotype of the teachers college or of the teacher-preparation program in a college or university represents it as being loaded with "dull methods courses," full of repetitious and trivial subject matter and utterly lacking in intellectual challenge. To the extent that this is true it imposes a responsibility on the institutions that prepare teachers to revise and improve their programs. To the extent that it is untrue but believed to be true by the capable young people these institutions hope to attract to the teaching profession, it challenges them to combat the stereotype with a more accurate representation of teacher education.

Not only is the common image of the preparation for teaching a stereotype, but the image of the teacher, especially the elementary-school teacher, is likely to be a stereotype also. It is easy to conceive the typical schoolteacher as a dull and somewhat pedantic middle-aged woman laboring in a dreary routine of books, papers and pencils, blackboard and chalk, report cards, school bells, and impatient, uninterested children, just waiting for school to be over for the day. What is there in such a picture of teaching to make it seem desirable to capable young people at the time of their planning for careers? Does the fact that elementary-school teachers work with young children imply that their tasks are quite ordinary and easy, demanding knowledge only at the children's level, or may the teaching even of young children be complex and difficult and require special knowledge and understanding? If teaching, when properly conceived and when practiced in such a way as to produce the best results, is a highly challenging occupation, then a greater effort to present it in its true light to those who might wish to choose it as a professional career is needed. One of the principal concerns of the Yale–Fairfield Study has been the development of an adequate concept of teaching and its application in experimentation. Public acceptance of such a concept would indeed be a long step toward increasing the attractiveness of the profession to capable youth.

A large number of young people having the characteristics of excellent potential teachers do not enter college because of the cost and for a variety of other reasons that might be overcome to the benefit of society and of the young people themselves. Many high school graduates of high ability drift into careers less rewarding than teaching merely because in such occupations they can begin earning money immediately after high school, whereas the preparation for teaching generally involves loss of immediate earnings and some direct expense as well. The drop-out between high school and college and during college years, though it undoubtedly includes more than a proportionate share of students of inferior ability, has been shown repeatedly to include a great many whose abilities and other personal qualities are of the highest and who would be an asset to the teaching profession if they were able to prepare for it. This probably represents the largest available new source of potential teachers. Particular attention should therefore be given to it.

The problems of overcoming the obstacles that prevent capable young people from choosing a teaching career and preparing for it are difficult but not insurmountable. Many promising ideas have been advanced, including more definite and direct recruiting activity, the development of such organizations as the Future Teachers of America and the Association for Student Teaching, various arrangements for cadet teaching, the provision of scholarships, many new types of teacher-preparation programs, and the use of teacher assistants as a means of improving the utilization of teachers' professional skills.

The Yale–Fairfield Study has made use of the idea of teacher assistants in conjunction with other ideas in developing four projects designed to contribute to the solution of the general problem of attracting capable people to teaching. Each project embodies a different set of conditions and is directed toward a different aspect of the problem. They are as follows:

1. An experiment in the use of high school graduates not planning to enter college as teacher assistants. This project focused primarily on the need to relieve teachers of subprofessional tasks and duties so as to enable them to accept larger professional responsibilities, including a moderate increase in number of pupils served by the professionally trained teacher and her assistant together. A two-year experiment begun in 1955, it was completed by 1957 and reported in full in 1958.[2] Since such a revision of the teacher's role might imply a corresponding revision of salary scale, the experiment has an important bearing on the salary obstacle to teacher recruitment. It also lends itself to more flexible arrangements within the school aimed at the improvement of teaching through better utilization of the special skills of individual teachers, such as the multiple-faculty plan of organization whereby several teachers pool their skills for the benefit of combined or reshuffled groups of children.

2. An experiment in the recruitment and preparation for teaching of young mothers who are college graduates in a program of part-time study and limited service as teacher assistants. This program is aimed directly at the problems of recruitment and the nature of the preparation for teaching. It selects a specific group of potential teachers—college-educated women whose current family responsibilities may prevent them from entering regular programs of teacher preparation but who can anticipate greater freedom within a few years—and offers them a special kind of preparation featuring thoroughness in the study of educational theory and practice, extensive opportunity for observation, participation, and practice teaching, and convenience in the scheduling of class meetings and other activities so as to avoid undue conflict with home responsibilities. This project was carried on cooperatively with the University of Bridge-

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[2] Yale–Fairfield Study of Elementary Teaching, *Teacher Assistants* (New Haven, Connecticut: The Study, 1958).

port, which issued the college credits required for professional certification; it was begun late in 1955, completed in 1958 and reported in full in 1959.[3]

3. An experiment in the use of teachers college students as teacher assistants in a program combining work and study and leading to professional certification. This four-year project, carried on cooperatively with Danbury State College, was begun in 1955 and completed in 1959. As it is the subject of the present report, its relation to the general purposes of the Yale–Fairfield Study will be explained more fully in the next chapter.

4. A project for the development of a handbook on the use of carefully selected and trained volunteers as teacher assistants. This undertaking was directed mainly toward the problem of relieving teachers of clerical, routine, and easy instructional duties with concomitant increase in professional responsibility, but it also has implications with respect to salaries. Furthermore, it seems likely that some volunteers, after gaining a little experience, might decide to prepare for teaching careers. This project did not involve outright experimentation, but drew upon the experience of school people who were using or had previously used volunteers. It was begun in 1956 and concluded with the publication of a guide in 1960.[4]

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[3] Yale–Fairfield Study of Elementary Teaching, *Teacher Preparation for Mothers Who Are College Graduates* (New Haven, Connecticut: The Study, 1959).

[4] Yale–Fairfield Study of Elementary Teaching, *Volunteer Service in the Schools* (New Haven, Connecticut: The Study, 1960).

## II

# THE FELLOW PROGRAM—A FOUR-YEAR EXPERIMENT

## A. The Problem

### *Relation to the Study as a Whole*

The Yale–Fairfield project in the use of teachers college students as teacher assistants was designated as the "Fellow Program," because the students involved, called "Teaching Fellows" (hereinafter referred to simply as "Fellows"), were paid substantial stipends in return for their work. It was an attempt simultaneously to overcome several of the obstacles that prevent larger numbers of capable young people from choosing teaching careers. By their service as assistants the Fellows were expected to relieve teachers of subprofessional tasks and permit them to concentrate more fully on actual teaching. At the same time the Fellows would presumably gain valuable experience that would contribute much to their professional preparation for teaching. A carefully planned program designed to utilize this experience and integrate it with the more theoretical study of education would, it was hoped, constitute a form of preparation that would appeal strongly to capable young people. The obstacle of the cost of preparation would be much reduced by the earned stipends the Fellows would receive. Thus a number of incentives were combined, and it was hoped that advantages would accrue not only to the Fellows but also to the teachers and pupils in the cooperating school system. It was recognized, however, that the feasibility of such a plan and the question of whether the supposed advantages would actually materialize must be put to the test of a carefully designed experiment with adequate provision for the evaluation of the various expected outcomes. The first step, of course, was a review of previous studies of the problem.

### *Previous Studies*

Large-scale efforts to attract a greater number of able people to the teaching profession have been under way for several years. The activities of the Fund for the Advancement of Education in this field from 1951 to 1957 have been summarized by Woodring.[1] The several projects of the Yale–Fairfield Study are directly related to these efforts as well as to the comparatively few experiments with aides or assistants to classroom teachers. The project that is the subject of the present report is distinguished from previously reported experiments in a number of ways. As a four-year undergraduate program for the preparation of elementary-school teachers it is unlike all but one of the projects described by Woodring, which, with a single exception, either were directed exclusively to the preparation of secondary-school teachers or were at the graduate rather than the undergraduate level. The Wilson College Program in Elementary Education,[2] which is the exception, is a modification of a liberal arts program to provide for additional summer readings in education, summer work experience with children, student teaching, and an integrative unit-course in elementary-school curriculum and methods running throughout the junior and senior years. It allocates more time to liberal arts courses and less to work experience in elementary schools than the program here reported.

Although the value of an internship period as part of a program of preparation for teaching has been recognized quite generally, the project here reported is one of the very few examples of its use at the undergraduate level to be found in educational literature, and only two other examples are known to the writers where the interns functioned as assistant teachers for considerable periods during two or more years. Myers[3] advocated such a plan in 1957. Bradfield,[4] Miner,[5] and Permenter[6] each report on undergraduate teaching internships of one year's duration or less. They all attest to the practical value of establishing a strong connection between theory and practice by means of a planned program that incorporates both internship experience and college courses. Butterweck,[7] however, suggests that the attempt to give prospective teachers too much responsibility for direct work with children too early in their program of preparation may be unwise because of their lack of readiness for such experiences. This is a very important point for the present study, because the program of the Yale–Fairfield Fellows permitted them to take on the rather responsible status of teacher assistant from the very start of their college careers. The evidence as to their readiness for such assignments will be given in a later chapter.

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[1] Paul Woodring, *New Directions in Teacher Education* (New York: Fund for the Advancement of Education, 1957).

[2] *Ibid.*, pp. 132–33.

The two programs in which students preparing to be teachers have periods of school work-experience of more than one year's duration are the cooperative program sponsored by Flint Community Junior College and Central Michigan College and the internship program of Northeastern University. The former is described in some detail by Myers as a proposal, and a brief reference to it elsewhere indicates that it was placed in operation, but the results have apparently not been reported.[8] Vander Werf[9] describes the Northeastern University internship plan, which is a five-year rather than a four-year program and serves secondary as well as elementary schools. Its general plan of early introduction to the serious work of the school through assignment in various assisting capacities, its coordination of theory with practice through concurrent seminars, and its deliberate concern for the safeguarding of pupils from the untoward effects of the mistakes of the inexperienced are important points of similarity to the Fellow Program of the Yale–Fairfield Study. One of the criticisms that may be leveled against such a program is that with so much time allocated to work experience only a scant amount remains for the student's basic liberal arts education. Dean Vander Werf does not deal with this question in the article cited, but a general idea of the liberal arts courses normally taken by students in the program can be gleaned from the Northeastern University catalog. Careful evaluation of the attainment of the objective of a sound basic liberal education was an important feature of the present experiment, and perhaps one that justifies a claim to distinction. Admittedly, the time devoted to strictly liberal arts courses in the Yale–Fairfield Study program, while every bit as ample as that provided by four-year teachers college courses generally, falls far short of the full four years offered by the traditional liberal arts colleges. In Chapter III the evidence as to the comparative adequacy of the actual performance of seniors in the Yale–Fairfield Study program and seniors in liberal arts colleges on tests relating to the liberal education objective will be presented.

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[3] Spencer W. Myers, "There is an Answer to the Teacher Shortage," *Nation's Schools*, 59:43–46, April, 1957.

[4] L. E. Bradfield, "Internship in Teacher Education," *Educational Administration and Supervision*, 41:238–39, April, 1955.

[5] George D. Miner, "Teacher Intern Program," *School Executive*, 74:48–49, September, 1954.

[6] J. A. Permenter, "Statewide Program of Teaching Internship," *Teachers College Record*, 53:441–50, May, 1952.

[7] Joseph S. Butterweck, "Too Much and Too Early," *Educational Administration and Supervision*, 41:285–92, May, 1955.

[8] See Myers, *op. cit.* and "A Description of the Activities of the Mott Foundation Program in Flint, Michigan," *Journal of Educational Sociology*, 33:169, December, 1959.

[9] Lester S. Vander Werf, "Interns Help Teachers," *American School Board Journal*, 134:25–26, June, 1957.

Previous experiments with teacher assistants are not numerous, although one of them, carried on at Bay City, Michigan, generated a considerable amount of comment in the educational literature. It was reported mainly in two documents issued by Central Michigan College.[10] One promising outcome of the teacher aide program, as it was called, was the discovery of interest on the part of some of the aides in becoming fully qualified teachers. Apart from the previously described teacher assistant program of the Yale–Fairfield Study,[11] two other experiments along similar lines must be mentioned: the school aide program of the Catskill Area Project in Small School Design,[12] and the experiment in the use of "instructional secretaries" under the Peabody Research and Development Program at Nashville, Tennessee.[13] In the former the helpers were assigned not to individual teachers but to schools, small rural high schools in this case, as a means of alleviating the work load of teachers in such functions as clerical work and supervision of study hall. In the latter the helpers were trained in secretarial work and each was assigned to several elementary-school teachers to assist them in whatever work required the use of such skills. All four of these projects received support from the Fund for the Advancement of Education.

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[10] *A Cooperative Study for the Better Utilization of Teacher Competencies, First Printed Report, 1953,* and *Second Printed Report, 1955* (Mount Pleasant, Michigan: Central Michigan College, 1953 and 1955).

[11] Yale–Fairfield Study of Elementary Teaching, *Teacher Assistants, op. cit.*

[12] Mildred Whitcomb, "A Living Laboratory for Improving the Small High School, *Nation's Schools,* 63:53–58, March, 1959.

### *Unanswered Questions*

Although various cooperative or internship programs of teacher preparation are described in the literature, some of which might be expected to have an important bearing on the problem of teacher recruitment, but little is known about results. How adequate, one may ask, is the provision for liberal education in such programs? Do they provide a sound understanding of educational theory? Are the teachers who graduate from such programs sufficiently well grounded in the subject matter they are about to teach? Do they know a great deal more about children as a result of internship experiences? To what degree have they acquired teaching readiness? All these questions refer to the students preparing to be teachers, but there are others that refer to the people with whom they work during their periods of school service. How would experienced and capable teachers utilize the services of student assistants? Would these teachers be able to extend the professional aspects of their work and thus meet greater responsibilities in teaching? Would the needs and interests of pupils be sufficiently provided for? The literature at present does not provide adequate answers.

The experiment that forms the subject of this report was not planned as the first step in a continuing program of teacher preparation, each group of students being succeeded by another. Rather it was regarded as a prototype to be observed, described, evaluated, and reported purely for the sake of whatever insights might be gained into the basic problems of teacher recruitment and improvement of teaching and into the problem of devising better programs in the future. Its structure was determined by the characteristics the experimenters thought future teacher-education programs should have: strong appeal to students of the highest caliber, a sound integration of educational theory and practice built upon a foundation of liberal education, a positive contribution to the establishment of teaching as a fully professional activity, and costs to the students moderate enough to be practicable for the many excellent potential teachers who are deterred from entering the profession because of the expense. In the remainder of this chapter we shall provide a more detailed description of the experiment itself; then, in the chapters that follow, we shall turn to evaluation of the program first as a preparation for teaching and as experience for those who are students in it, and secondly as service to the teachers and pupils of the Fairfield School System; and finally we shall consider what conclusions and implications can be drawn from the experiment.

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[13] David T. Turney, *The Instructional Secretary as Used by Classroom Teachers*, Peabody Research and Development Program, George Peabody College for Teachers, Nashville, Tennessee, 1959 (multilithed).

## B. Description of the Experiment

### *Basic Structure*

In designing the basic structure of the experiment the Staff of the Study had to keep certain essential requirements in mind. The structure had to allow for work and study periods of such duration that the Fellows could make substantial progress with each activity before being interrupted, and in such sequence that the learning from each period would contribute to that of the next. It had to provide a reasonable continuity of service to the cooperating teachers in whose classrooms the Fellows were to work as assistants, so that the teachers themselves might explore the potentialities of the situation for their own professional growth. This, it will be remembered, was one of the original purposes of the project. And it had to be conformable to a feasible schedule of courses and teaching responsibilities at the college end, not requiring the establishment of many special courses for the sole benefit of the Fellows nor an undue burden on staff time.

The program actually established meets the requirements stated above by means of a two-group, alternating semester plan. The members of one group attended college and were included in regular classes while the members of the other group had work assignments in the schools. At the end of the semester the groups were reversed. During the first three years each work assignment was undertaken by a pair of Fellows, one member of each pair working at the job the first semester, the other the second. In their senior year all of the Fellows had work-and-practice-teaching assignments the first semester and all returned to the campus the second semester to complete their college work and be ready to graduate with the rest of the class. All the Fellows attended summer sessions at college during the three summers between the regular college years, thus completing much of the academic work missed while serving on work assignments. Other college work was taken in the form of extension courses carried concurrently with the work assignments. By the combination of these arrangements all college requirements for the B.S. degree and all state requirements for provisional teacher certification were met. Table 1 shows in schematic diagram the basic sequence of periods in the Fellow Program for the two groups.

### *The Cooperating College*

In the early stages of development of the Fellow Program the general ideas involved were discussed with the president, dean, and certain members of the faculty of Danbury State College. For two major reasons Yale University was not in a position to provide the undergraduate courses for prospective teachers that the program presupposed: its entire undergraduate offering at the time was restricted to men; and its offerings in the field of education were designed as preparation for secondary-school rather than elementary-school teaching and were mainly at the graduate level. Danbury State College was directly responsible, under the Connecticut State Board of Education, for curricula leading to certification for elementary-school teaching, and its geographical proximity to Fairfield made it a logical choice as the cooperating institution for the Fellow Program.

After a series of conferences in which the practical aspects of the proposed experimentation were thoroughly explored, the staff of the

## TABLE 1

*Sequence of Periods of School Service and College Attendance by Groups A and B*

| | FRESHMAN YEAR (1955–56) | | | SOPHOMORE YEAR (1956–57) | | | JUNIOR YEAR (1957–58) | | | SENIOR YEAR (1958–59) | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Semester* | | *Summer* | *Semester* | | *Summer* | *Semester* | | *Summer* | *Semester* | |
| | *I* | *II* | | *I* | *II* | | *I* | *II* | | *I* | *II* |
| School service | A | B | | A | B | | B | A | | All | |
| College attendance | B | A | All | B | A | All | A | B | All | | All |

*Note:* Certain extension courses were taken by the Fellows in Fairfield during their periods of school service.

Yale-Fairfield Study and the college authorities reached an informal agreement by the terms of which carefully selected candidates for admission to the incoming freshman class for the academic year 1955–56 would be offered the opportunity of participating in the Fellow Program. The college, of course, would apply its regular admission standards, the selection being restricted, for practical purposes, to candidates whose qualifications would entitle them to consideration for scholarships. Furthermore, the college undertook to provide a modified sequence of courses by which the students selected for the Fellow Program might fulfill the requirements for the B.S. degree and state certification requirements. The college agreed also insofar as possible to provide housing and other services to the students to minimize the difficulties they might otherwise encounter in an alternating semester plan. The staff of the Yale–Fairfield Study agreed to provide field supervision on behalf of the college and all information and reports requested by the college for its own purposes. They also undertook to teach or arrange for the teaching of certain courses to be given in extension.

### *Schedule of Courses*

In adapting the course offerings of Danbury State College to the needs of a special experimental group of able students attending college on an alternating-semester-and-summer-session plan the persons in charge of the experiment set up certain general principles for their own guidance. Course work in the liberal arts areas was not to be curtailed at any point and was to be augmented wherever possible. The Fellows were to be encouraged to use their electives to strengthen their background in liberal arts. Professional subject matter that would unnecessarily duplicate learning from work experience was to be waived, but professional subject matter that would amplify and illuminate work experience or that would not otherwise be covered was to be retained. The regular student teaching periods would be incorporated into the work periods of the junior and senior years.

The existing course sequence in elementary education at Danbury State College, as described in the college catalog, is set forth below:

## *Curricula and Description of Courses*
## *Four-year Elementary Curriculum*

### FIRST YEAR

| | | *Semester Hours* |
|---|---|---|
| Art 100 | Art Structure | 2 |
| Ed. 110 | Educational Psychology | 4 |
| Eng. 120 | Contemporary Literature | 3 |
| Eng. 121 | Spoken Expression | 3 |
| P.E. 140 | Physical Education I | 2 |
| Math. | Mathematics | 6 |
| Mus. 160 | Music Theory I | 2 |
| Sci. 180b | Science I | 3 |
| Sci. 181b | Science II | 3 |
| S.S. 194 | World Civilization | 6 |
| | | 34 |

### SECOND YEAR

| | | |
|---|---|---|
| Art 200 | Crafts | 2 |
| Ed. 210 | Child Growth and Development | 6 |
| Eng. 220 | Written Expression | 3 |
| Eng. 221 | American Literature | 3 |
| P.E. 240 | Physical Education II | 2 |
| Mus. 260 | Music Theory II | 2 |
| Sci. 281a | Science III | 3 |
| Sci. 281b | Science IV | 3 |
| S.S. 296 | American Civilization | 6 |
| | Electives | 6 |
| | | 36 |

### THIRD YEAR

| | | |
|---|---|---|
| Art 300 | Arts in the Elementary School | 2 |
| Ed. 310 | Student Teaching I | 6 |
| Ed. 311 | Curriculum Materials I | 6 |
| Ed. 312 | Modern Elementary Schools | 2 |
| Ed. 313 | Audio-Visual Instruction | 2 |
| Eng. 320 | Children's Literature | 3 |
| P.E. 340 | Methods and Materials in Physical Education for the Elementary School | 4 |
| Mus. 360 | Professionalized Subject Matter in Music | 2 |
| S.S. 390 | Principles of Human Geography | 3 |
| | Electives | 4 |
| | | 34 |

### FOURTH YEAR

| | | Semester Hours |
|---|---|---|
| Art 400 | History and Appreciation of Art | 2 |
| Ed. 410 | Student Teaching II | 8 |
| Ed. 411 | Curriculum Materials II | 6 |
| Ed. 412 | Educational Tests and Measurements | 3 |
| Ed. 413 | History and Philosophy of Education | 3 |
| Eng. 420 | World Literature | 3 |
| P.E. 440 | Organization and Administration of Physical Education | 2 |
| P.E. 441 | School and Community Health and Safety | 2 |
| Mus. 460 | History and Appreciation of Music | 2 |
| S.S. 493 | Regional Geography of the United States and Canada | 3 |
| | | 34 |

The curriculum outlined above is almost entirely a prescribed course, only ten of the 138 semester hours being allowed for electives. The emphasis on liberal arts in the first two years is apparent in the fact that only one professional course each year is provided. In the third year the emphasis shifts to the subject matter to be taught in elementary school, much of which is derived from liberal arts areas. The emphasis on professional education courses is reserved until the senior year, when theory of education and practice in the form of student teaching predominate. It will be noted, however, that liberal arts courses do appear also in the last two years. In comparison with the offerings of teachers colleges generally the liberal arts program is a strong one. The provisions for student teaching are about on a par with those of other similar institutions.

The modified sequences for the Fellows in groups A and B are given below:

*Sequence of Courses in Fellow Program*

FIRST YEAR

| | GROUP A | | GROUP B | |
|---|---|---|---|---|
| | *Course* | *Sem. Hrs.* | *Course* | *Sem. Hrs.* |
| Semester I: | Ed. 110 | 2 | Art 100 | 2 |
| | | | Ed. 110 | 2 |
| | | | Eng. 121 | 3 |
| | | | P.E. 140 | 1 |
| | | | Math. 151a | 3 |
| | | | Sci. 180a | 3 |
| | | | S.S. 194 | 3 |

### FIRST YEAR

| | GROUP A | | GROUP B | |
|---|---|---|---|---|
| | *Course* | *Sem. Hrs.* | *Course* | *Sem. Hrs.* |
| Semester II: | Ed. 110 | 2 | Ed. 110 | 2 |
| | Eng. 120 | 3 | P.E. 140 | 1 |
| | P.E. 140 | 1 | | |
| | Math. 151a | 3 | | |
| | Mus. 160 | 2 | | |
| | Sci. 181a | 3 | | |
| | S.S. 194 | 3 | | |
| Summer: | Eng. 121 | 3 | Math. 151a | 3 |
| | Math. 151a | 3 | Mus. 160 | 2 |
| | S.S. 194 | 3 | S.S. 194 | 3 |
| | | 28 | | 28 |

### SECOND YEAR

| | GROUP A | | GROUP B | |
|---|---|---|---|---|
| | *Course* | *Sem. Hrs.* | *Course* | *Sem. Hrs.* |
| Semester I: | Ed. 210 | 3 | Art 200 | 2 |
| | | | Ed. 210 | 3 |
| | | | Eng. 120 | 3 |
| | | | Eng. 220* | 3 |
| | | | P.E. 240 | 1 |
| | | | Mus. 260 | 2 |
| | | | S.S. 296 | 3 |
| | | | Elective | 3 |
| Semester II: | Art 100 | 2 | Ed. 210 | 3 |
| | Art 200 | 2 | | |
| | Ed. 210 | 3 | | |
| | Eng. 220* | 3 | | |
| | Mus. 260 | 2 | | |
| | S.S. 296 | 3 | | |
| | Elective | 3 | | |
| | Elective | 2 | | |
| Summer: | Eng. 221 | 3 | Eng. 221 | 3 |
| | P.E. 140 | 1 | | |
| | P.E. 240 | 1 | P.E. 240 | 1 |
| | Sci. 180a | 3 | Sci. 180a | 3 |
| | Sci. 180b | 3 | Sci. 180b | 3 |
| | | 34 | | 33 |

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* Four of the Fellows, two from each group, were excused from this requirement and took additional electives.

### THIRD YEAR

| | GROUP A | | GROUP B | |
|---|---|---|---|---|
| | *Course* | *Sem. Hrs.* | *Course* | *Sem. Hrs.* |
| Semester I: | Art 300 | 2 | Ed. 310 | 6 |
| | Ed. 311 | 3 | Ed. 311 | 3 |
| | Ed. 313 | 2 | Ed. 312 | 2 |
| | Eng. 320 | 3 | P.E. 340 | 4 |
| | P.E. 240 | 1 | | |
| | Sci. 180a | 3 | | |
| | S.S. 296 | 3 | | |
| | Elective | 3 | | |
| Semester II: | Ed. 310 | 6 | Ed. 311 | 3 |
| | Ed. 311 | 3 | Ed. 313 | 2 |
| | Ed. 312 | 2 | Eng. 320 | 3 |
| | P.E. 340 | 4 | Sci. 181a | 3 |
| | | | S.S. 296 | 3 |
| | | | Elective | 2 |
| | | | Elective | 3 |
| Summer: | Mus. 360 | 2 | Mus. 360 | 2 |
| | S.S. 390 | 3 | S.S. 390 | 3 |
| | Elective | 3 | Elective | 3 |
| | | 43 | | 42 |

### FOURTH YEAR

| | GROUP A | | GROUP B | |
|---|---|---|---|---|
| | *Course* | *Sem. Hrs.* | *Course* | *Sem. Hrs.* |
| Semester I: | Ed. 410 | 8 | Ed. 410 | 8 |
| | Ed. 411 | 6 | Ed. 411 | 6 |
| | Ed. 416* | 3 | Ed. 416* | 3 |
| Semester II: | Ed. 413 | 3 | Ed. 413 | 3 |
| | Eng. 420 | 3 | Eng. 420 | 3 |
| | P.E. 441 | 3 | P.E. 441 | 3 |
| | S.S. 493 | 3 | S.S. 493 | 3 |
| | Hist. & Appr. of Art & Music | 3 | Hist. & Appr. of Art & Music | 3 |
| | | | Methods in Art | 2 |
| | | 32 | | 34 |

A comparison of the modified with the original curriculum will show that only minor changes in content were made. There were, of course, slight variations in the programs of the individual Fellows, but the nature of the studies pursued by each conformed closely to the pattern previously established by the college. In some courses, viz. Freshman Mathematics, World Civilization, and the science sequence, the normal order was altered for some or all of the Fellows. Only one course, Organization and Administration of Physical Education, was omitted entirely, but a companion course, School and Community Health and Safety, was taken for three credits instead of two. The senior courses in History and Appreciation of Art and History and Appreciation of Music, of two credits each, were combined into a single three-credit course.

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* This course, entitled Educational Measurement and Evaluation, was substituted for Ed. 412, Educational Tests and Measurements.

Most of the courses that were carried for credit during the periods when the Fellows were on work assignments were in the field of professional education. They were scheduled in late afternoons so as not to conflict with school responsibilities and were generally taught by members of the staff of the Study.[14] The recapitulation below of all education courses classified according to location where they were given reveals that nearly three-fourths of this pre-professional work was given at Fairfield:

| | | CREDITS | | |
|---|---|---|---|---|
| *Course* | *Title* | *Total* | *At Danbury* | *At Fairfield* |
| Ed. 110 | Educational Psychology | 4 | 2 | 2 |
| Ed. 210 | Child Growth and Development | 6 | 3 | 3 |
| Ed. 310 | Student Teaching I | 6 | | 6 |
| Ed. 311 | Curriculum Materials I | 6 | 3 | 3 |
| Ed. 312 | Modern Elementary Schools | 2 | | 2 |
| Ed. 313 | Audio-Visual Instruction | 2 | 2 | |
| Ed. 410 | Student Teaching II | 8 | | 8 |
| Ed. 411 | Curriculum Materials II | 6 | | 6 |
| Ed. 413 | History and Philosophy of Education | 3 | 3 | |
| Ed. 416 | Educational Measurement and Evaluation | 3 | | 3 |

In addition a certain amount of course work in physical education, notably Methods and Materials in Physical Education for the

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[14] Dr. John J. Howell, Assistant Director of the Study, New Haven, taught the course in Educational Measurement and Evaluation. Dr. Constance M. Burns, Assistant Director of the Study, Fairfield, taught all other Education courses given in Fairfield.

Elementary School (P.E. 340), was given in Fairfield, the instruction being provided by a highly qualified staff member of the Fairfield school system.[15]

All the Fellows completed more than the usual amount of course work in elective subjects, nearly all of which were chosen from liberal arts areas. Of the thirty-seven course elections by the eight Fellows three were in the field of Art, seventeen in English, fifteen in Social Science, one in Science, and one in Education. The course titles included such topics as Modeling and Pottery, the Novel, Public Speaking, Shakespeare, Modern Poetry, American Government, International Relations, Cultural Anthropology, and Astronomy.

### *The Cooperating School System*

The Fairfield, Connecticut, Board of Education and its chief agent, the Superintendent of Schools, were instrumental in initiating the whole enterprise known as the Yale–Fairfield Study of Elementary Teaching. The availability of the Fairfield schools as a general laboratory wherein specific experimental projects might be carried on was thus assured from the very beginning.

Fairfield is mainly a suburban community, lying adjacent to the city of Bridgeport, Connecticut, and within commuting distance of New York City. In the period since World War II it has experienced rapid growth and corresponding expansion in its school system, the school population in 1960 being nearly 9400. The problem of providing new classrooms and additional teachers rapidly enough to keep pace with the increase in the school population has been met in the main during this period of growth, by reason of the willingness of the citizenry to provide the necessary financial support. Reasonable standards of class size have generally been maintained and double sessions largely avoided in the elementary schools. With the completion of the Andrew Warde High School double sessions at the secondary level were eliminated, also.

In undertaking the series of experimental projects, of which the Fellow Program is one, the Fairfield school authorities recognized the important contribution that a local school system can make toward the solution of general problems. The need to relieve teachers of various sub-professional tasks and "duties," for instance, was perceived to be a general problem that could be tackled directly within the Fairfield school system. The need to interest talented young people in careers in teaching was recognized as a local and immediate problem for which the community needing to employ a steady stream of new teachers might well accept greater responsibility, not leaving the entire burden of recruitment on the colleges and universities. The possibility that the local school system might even participate more extensively in the actual process of teacher preparation, as provided for in the Fellow Program, was accepted as a promising approach to the general problem of providing new avenues into teaching.

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[15] Miss Helen Gibson, Pequot School, Fairfield.

In order to facilitate the detailed arrangements that would need to be made in connection with the experimental programs of the Yale–Fairfield Study, the Fairfield Superintendent of Schools granted an extended leave of absence to an experienced member of his staff, an elementary school principal, who was made an Assistant Director of the Study. This person also coordinated the field operations of the Fellow Program with the program of Danbury State College.

### *Schedule of School Assignments*

The problem the staff of the study encountered in selecting appropriate school assignments for the Fellows during their work periods was to give proper weight to each of two major objectives of the entire study: the provision of needed services to teachers to enable them to extend their own professional effectiveness, and the provision of learning opportunities for the Fellows through their active participation as teacher assistants. An effort was made to assign the Fellows only to situations where their services were really needed, either by reason of the size of the class group or because of other special circumstances, such as, for instance, the temporary double-sessioning of certain classes pending the opening of a new school. Furthermore, in the selection of cooperating teachers the staff sought to choose only those who were likely to be able to make constructive use of the additional help for the immediate benefit of their pupils and for their own professional development. The first of these restrictions somewhat reduced the number of potential situations in which a Fellow might be assigned, a number further reduced by the fact that another experimental group of teacher assistants were being placed in generally similar situations in Fairfield at the same time. The second, however, merely specified a condition that corresponded closely with conditions desirable anyway from the point of view of selecting favorable learning situations for the Fellows. Additional characteristics sought in the cooperating teachers were general teaching skill, ability to explain and clarify the teaching-learning process to the Fellow, and willingness to participate in the experiment and do whatever extra observing, evaluating, and reporting this might involve. Since these personal characteristics often tend to be associated in the personality pattern of individual teachers, they do not constitute completely independent criteria for selection. But they do define, approximately, the steps by which the selection of the cooperating teachers was actually accomplished. The appraisal of each of the various factors was based not on any attempt at measurement (except for class size), but on the judgment of one or more staff members with the advice and cooperation of the Fairfield school authorities.[16]

As the Fellow Program progressed, new assignments were chosen, partly on the basis of how well they would provide for variety of experience for each of the Fellows. Assignment at several different grade levels, for instance, could be provided without serious departure from the other criteria. In the fourth and last year, however, a choice had to be made that did involve a considerable departure from the previously established conditions for the work assignments. Since the assignment of Fellows' services was governed in part by teachers' needs for assistance, the continuity of the service throughout the school year provided by the alternating-semester plan was of considerable importance. If the community were compensating the Fellows directly for value received, instead of their services being provided at no expense as part of an experiment, the question of their utilization to good advantage might then become a ruling consideration. However, adherence to the alternating semester plan in the senior year appeared to have some important disadvantages in terms of the preparation for teaching. Since seniors in the elementary education program at Danbury State College devote eight weeks of the first semester to student teaching, the schedule is so arranged that several key courses come in the second semester; and because it is expected that the seniors will graduate in June, these courses are not normally offered the following summer. Consequently it seemed advantageous to arrange for all the Fellows to be at college for the second semester of their senior year. It was decided, therefore, that the work periods in the senior year should occur in the first semester for all Fellows, the question of need for their services being subordinated to that of optimum program of preparation for teaching.

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[16] Dr. Constance M. Burns, then on leave of absence from her post as principal in the Fairfield school system and serving as Assistant Director of the Yale–Fairfield Study, had primary responsibility for the assignments.

Table 2 presents the primary assignments for school service for each Fellow. It can be seen by inspection that two of the cooperating teachers had Fellows assigned to them for two years or four consecutive semesters, that one teacher had Fellows for three consecutive semesters, that six teachers had Fellows for two semesters, and that nine teachers had Fellows for only one semester. The variety of grade assignments (figures in parentheses) provided for each Fellow is readily discernible.

### *Selection of Fellows*

Inasmuch as one of the primary interests of the entire study is in the recruitment of highly capable youth for the teaching profession, an essential requirement in the selection of the Fellows was the establishment of a high standard of qualifications. Only a highly qualified group could adequately test the merits of a program intended to attract capable youth and provide them with a sound preparation for teaching. The question of whether students of lesser attainments could perform acceptably under similar conditions was not embraced in the planning of the present project.

The qualifications sought in applicants for the Fellow Program were generally similar to those that any teacher-preparing institution would like to have its incoming freshmen present. They included:

### Table 2

*Primary Assignments of Fellows for School Service*
(grade assignments are shown in parentheses)

| GROUP AND FELLOW | COOPERATING TEACHER 1955–1956 |  | COOPERATING TEACHER 1956–1957 |  | COOPERATING TEACHER 1957–1958 |  | COOPERATING TEACHER 1958–1959 |  |
|---|---|---|---|---|---|---|---|---|
|  | *Sem. I* | *Sem. II* | *Sem. I* | *Sem. II* | *Sem. I* | *Sem. II* | *Sem. I* | *Sem. II* |
| *Group A* |  |  |  |  |  |  |  |  |
| Alberghini | Murphy (K) |  | Gibson (4) |  |  | Moore (2) | Broadhurst (6) |  |
| Foote | Gibson (4) |  | Van Valkenburgh (2, 3) |  |  | — | — |  |
| Kernicky | Mulligan (5) |  | Murphy (K) |  |  | Lindsay (4) | Lebinsky (1) |  |
| Paterson | Kane (6) |  | Klein (5) |  |  | Bushnell (1) | Agostino (6) |  |
| Smolskis | — |  | — |  |  | McGannon (5) | Halloren (1) |  |
| *Group B* |  |  |  |  |  |  |  |  |
| Block |  | Kane (6) |  | Murphy (K) | Lindsay (4) |  | Brotherton (3) |  |
| Buchwalder |  | Mulligan (5) |  | Gibson (4) | Moore (2) |  | Wall (6) |  |
| Schaalman |  | Gibson (4) |  | Klein (5) | Bushnell (1) |  | Curren (2) |  |
| Wilson |  | Murphy (K) |  | Van Valkenburgh (2, 3) | Klein (5) |  | Sherwood (4) |  |

1. High ability as evidenced by intelligence test scores and academic standing in high school class
2. Liking for children and serious interest in teaching
3. Personality characteristics of friendliness, firmness, and originality
4. Good physical and mental health
5. Adequate preparation for college

The fact that other experiments involving teacher assistants were to be carried on concurrently in the Fairfield schools, combined with the limited availability of funds and staff time, made it advisable to restrict the size of the group to eight Fellows. School guidance directors in the high schools of Fairfield and surrounding communities were informed of the general nature of the Fellow Program and of the opportunities it could offer to capable seniors who might be interested in preparing for a teaching career. Twenty-four well-qualified applicants were referred to the staff of the Study for further consideration.

In choosing among the young people whose applications were referred to them the interviewers, representing the Fairfield school system, Danbury State College, and the staff of the Study, further explored the areas of qualification listed above. Only two of the applicants were boys and neither of them was outstanding in comparison with the best of the girls who had applied. Although the inclusion of one or two boys would have made the group more representative of students preparing for teaching generally, the limited number of qualified applicants made it seem wiser at that point to restrict the group to girls only. The final selection was made on the basis of the pooled judgment of the interviewers regarding the applicants' probable success as teachers in view of all the available information about them.

Each of the Fellows selected was a highly promising student and potential teacher. As a group they were somewhat less remarkable for high-tested intelligence (a mean of 114) than for academic standing and personality characteristics. Six of them were in the top 10 per cent of their high school classes in scholastic achievement and the other two were in the top 20 per cent. All judges agreed that they were highly endowed with desirable personality traits for prospective teachers. Although they were young (average age at time of application, 17 years), all had in various ways obtained considerable experience in working with children. Some had assisted in school classrooms at the kindergarten or primary grade levels; others had worked with children at camps, community centers, or in Girl Scout activities; one had cared for children in a doctor's office, another in a hospital and home for crippled children; several had taught Sunday school, and nearly all had had experience in babysitting.

The girls chosen as Fellows possessed, in common with most of the other applicants, a strong and well-founded interest in teaching and saw in the proposed program important advantages. In explaining the reason for her interest in applying, in response to a question on the application form, one said:

> I am interested in applying for a Teaching Fellowship for several reasons. The first and, I feel, the most important reason is the chance to gain the invaluable classroom work experience which the Fellowship offers. Also, the financial assistance which accompanies this Fellowship will be very helpful for my parents in providing for my education. In my opinion, the Fellowship provides many unequaled opportunities for the future teacher which cannot be gained through a regular college program alone.

This reaction was typical and clearly shows that a program of this nature does, in fact, have a strong appeal to superior students. The replies to this question on all applications received are presented in Appendix A.

At midyear in the second year of the program one of the Fellows suddenly decided to leave and get married. She was replaced the following year by a student in the same class at Danbury State College who was one of several applicants for the position. In filling the vacancy an effort was made to obtain a person with qualifications comparable to those of the original group. The girl chosen was strongly recommended by the faculty of the College and was able to meet the standards previously established for selection for the Fellow Program.

### *Costs*

The general purposes of the Fellow Program have clear implications as to the costs. The objective of providing a preparation for teaching that would attract highly capable youth despite possible financial stringencies requires that the Fellows be paid a substantial amount in return for their services. If, however, it is assumed that the community where the services are rendered might well accept the burden of such costs to the extent of the value received, then the amounts paid must be a realistic approximation of the value of services, not a direct or indirect subsidy. (It is theoretically possible, of course, that communities might be willing to subsidize students in such a program, expecting them to return as teachers after graduation, but the practical possibility of community participation on the basis of fair return for any direct expense seems much greater.) The costs to be borne by the college in which the Fellows were to receive their training must also be held within the limits of what such an institution could normally sustain without impairing its other programs. Since the budgets of state-supported colleges are generally somewhat restrictive, the extra costs of assigning additional staff time to a small experimental group could not easily be absorbed. For the purposes of the present experiment it was assumed that the college should not be expected to meet any expenses beyond those it normally makes on behalf of all its students.

A stipend of $1,000 per year for the Fellows was established in consideration of (1) the amount of time to be devoted to school service, (2) the requirement that summers be devoted to college work, (3) the comparatively high level of ability and scholarly achievement of the Fellows, which would entitle them to strong consideration for State scholarships. This amount may be compared with the $1600 paid to high school graduates not preparing for teaching for their first year's work as teacher assistants in another experimental program, and with the $1800 paid them for the second year's work. The Fellows devoted approximately thirty hours a week for approximately eighteen weeks each year to school service. It is estimated that they might have earned approximately $400 each summer had they been free to accept employment. The State scholarships they might have applied for had they not been engaged in the Fellow Program amounted to $300 for a full scholarship, but might be divided, at the discretion of state authorities, among several students.

The entire amount of the Fellows' stipends was paid from the budget of the Yale-Fairfield Study because of the fact that the program was experimental. The Fairfield school system contributed services, office space and equipment, and miscellaneous items to the Study as a whole, but did not sustain the expense of direct payments to the Fellows. It has been estimated by the Assistant Superintendent of Schools, however, that in view of the value of the services received the cost of the Fellows' stipends would not have contributed greatly if at all to the average cost of instruction in Fairfield if they had been paid by the school system. In some instances savings were effected by reason of the assignment of Fellows in situations where assistance would in any event have been required. In other instances no direct saving resulted from the assignment of the Fellows but instructional services to pupils were increased.

# III

# THE FELLOW PROGRAM VIEWED AS PREPARATION FOR TEACHING

## A. Liberal Education

### *Introduction*

At the end of the Fellows' sophomore year, a battery of tests was administered to all sophomores, juniors, and seniors in the Danbury State College. The purpose, so far as the present section of the report is concerned, was to find out whether the Fellows had made less progress in the liberal arts areas because they had been off-campus during two semesters.

The new Teacher Education Examination Program (TEEP) tests were used. Although they were at that time untried, they had been prepared by the Educational Testing Service with a great deal of related experience to draw upon. The tests were made to supplement, not to replace, the National Teachers Examinations, which were to continue to serve hiring boards of education and individual teachers. The new TEEP tests were made to be administered to seniors by teacher-preparing colleges.

In the nine-test battery, Test 5 was an English test, Test 6 was a test on history, literature, and fine arts, and Test 7 was a test on mathematics and science. The other six tests pertain to professional preparation, the topic of the next section of the report. The tests were administered as late in May 1957 as the college schedule allowed. They were given under the direction of Dr. Norman A. Reed, Assistant Professor of Psychology at Danbury, who normally supervises objective testing programs at the College, and they were scored by the Educational Testing Service.

### *Control Group*

A sophomore control group was selected by pairing the Fellows as closely as possible with classmates. For use in matching, an ability index was assembled from admissions data on the permanent record cards. Four scores were averaged. One was the total score on the Iowa High School Content Examination, composed of sections on English, mathematics, natural science, and social studies. The second score was an IQ from the California Test of Mental Maturity. The third was a Nelson-Denny Reading Test score. The fourth measure included in the index was rank in the high school graduating class. The Iowa and Nelson-Denny scores were in the form of centile ranks. The IQ and the rank in the graduating class were converted into centile ranks before the four were averaged. This was done so that the averages might be similar to centile ranks for high school seniors, and thus be roughly interpretable as such. The index used in holding ability constant may be considered quite satisfactory with respect to both validity and reliability in view of its correlation of .72 with the total score on the three TEEP liberal arts tests (N=91).

Incidentally, it was observed in the data used for matching that the Fellows came from the top 20 per cent of their high school graduating classes. They were among the top 40 per cent of their class at Danbury with respect to the Ability Index.

The average Ability Index for both the Fellows and the control group was 79.5.

### *Comparison of Fellows with Controls*

The three liberal arts content tests showed little if any evidence of a lesser achievement. The averages were as follows, the differences statistically insignificant:

| | *Fellows* | *Controls* |
|---|---|---|
| English | 25.9 | 27.9 |
| History, literature, and fine arts | 22.1 | 22.7 |
| Mathematics and science | 21.9 | 20.7 |
| *Average* | 23.3 | 23.8 |

Although any loss suffered might be expected to have occurred in the freshman and sophomore years, the question was examined again, at the end of the senior year, with data from another battery of tests. The tests chosen on this occasion were the Graduate Record Examination, Area Tests. These tests were made for use in liberal arts colleges and were standardized in terms of the performance of seniors in twenty-one such colleges. The advantage of using these tests was that not only did they permit a comparison between the Fellows and their controls, but the scores of these groups could be described with reference to the performance of senior women in liberal arts colleges. Average scores were as follows:

| | *Soc. Sci.* | *Humanities* | *Nat. Sci.* |
|---|---|---|---|
| Fellows | 493 | 555 | 416 |
| Controls | 486 | 514 | 445 |
| Senior women in the liberal arts college normative group | 471 | 514 | 440 |

Had all groups been large, the differences would be worthy of note. The Fellows scored about 58 per cent of the normative group on the Social Science test and above 65 per cent of them on the Humanities test, but above only 37 per cent on the Natural Science test. The control group averaged more nearly like the normative group, their average scores being above 55, 50, and 52 per cent of the liberal arts senior women, that is, lower than the Fellows on the Social Science and Humanities tests but higher on the Natural Science test. However, none of these differences pass the 5 per cent test of statistical significance.

Whether the differences between the Fellows and their controls may be meaningful in spite of their statistical insignificance will be considered in a later section, in terms of the college courses taken. At this point there is no reason for thinking that the Fellows learned either more or less of liberal arts content than they would have learned from the usual Danbury schedule. They appear to have approximated the progress in the liberal arts areas which has been defined by the Educational Testing Service as typically made by senior women in liberal arts colleges.

Below, the Fellows and their controls are compared with the women in the Basic Reference Group (normative group) of liberal arts colleges.

*Number of the Sixteen Danbury Senior Women Scoring above the Norms for Liberal Arts College Senior Women*

| | *Humanities* | *Soc. Sci.* | *Nat. Sci.* |
|---|---|---|---|
| Above the 75th centile | 4 | 3 | 2 |
| Above the median | 10 | 8 | 6 |
| Above the 25th centile | 16 | 15 | 10 |

The table shows that bright girls like the Fellows, graduating from the top 20 per cent of their high school classes, can and do get from a teachers college like Danbury as much liberal arts education as is typically acquired in a liberal arts college.

## B. Professional Preparation

Because of their work in Fairfield, had the Fellows learned something which their classmates had not had the opportunity to learn? If they had, were they as far along as the juniors? How would they compare with seniors? These questions were asked, and arrangements were made to answer them because it was thought that the Fellows may have learned from their work during their freshman and sophomore years what students do not ordinarily learn until they have practice-teaching experiences during their junior and senior years. Junior and senior control groups were therefore selected on the same basis used in selecting the sophomore control group as described in the previous section. The Ability Index averages were as follows:

| | |
|---|---|
| Fellows | 79.5 |
| Sophomore control group | 79.5 |
| Junior control group | 79.0 |
| Senior control group | 79.1 |

### *Professional-Test Scores*

Below are shown the average scores on the six professional tests in the TEEP battery for the Fellows and the three control groups.

As may be seen in the table, the Fellows scored neither higher nor lower than their classmates with equal ability. Apparently they

| | Fellows | Sophomore Controls | Junior Controls | Senior Controls |
|---|---|---|---|---|
| Foundations of Education | 20.6 | 22.6 | 26.0 | 24.3 |
| Child Development and Educational Psychology | 23.9 | 23.7 | 27.4 | 26.3 |
| Guidance and Measurement | 22.1 | 20.6 | 21.3 | 25.0 |
| Methods | 22.6 | 24.0 | 24.4 | 24.7 |
| Early Childhood Education | 19.7 | 19.0 | 27.7 | 25.1 |
| Elementary Education | 19.7 | 19.9 | 25.6 | 25.6 |
| Averages | 21.4 | 21.6 | 25.4 | 25.2 |

had not learned anything about elementary schools and teaching not learned by the sophomore controls. The word "apparently" is used advisedly, because another finding shown in the table raises a question concerning one phase of the validity of the tests. The finding is that the seniors scored no higher than did the juniors. This lack of differentiation between classes may have been due to a failure on the part of the tests to measure the outcome of what is thought of as an important part of the senior year, namely practice teaching. It is the seniors' experience in the school situation which the Fellows might be expected to have approximated, so far as learnings are concerned.

It is conceivable that by the end of the junior year these teachers college students may have learned nearly all about the theory of elementary education which they will learn.[1] It is inconceivable that from practice teaching seniors learn nothing about schools or about teaching. It is not being suggested that the TEEP tests might have been totally lacking in validity. The fact that juniors scored higher than sophomores negates such a suggestion. But the tests may have been incapable of measuring that which is learned from responsible first-hand experience in the classroom. The tests may have been capable of measuring only a more academic or bookish knowledge of teaching.

Two other possible causes for the lack of differentiation between junior and senior classes were considered. Tests which are too easy, that is, which are lacking in "top," might fail to differentiate as the TEEP tests did. This possibility was rejected because the seniors at several other colleges made higher scores than were made by the

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[1] A possible exception to the above statement that seniors scored no higher than juniors is in the area of Guidance and Measurement.

Danbury seniors, whose scores placed them only slightly above the tentative norm. There is also the possibility that senior application may have been inferior to that of the juniors. This possibility cannot be rejected. Dr. Reed and some other members of the college faculty were of the opinion that the seniors, being "through" all but commencement, did not try as hard on the tests as did the juniors.

The need was then for better tests or a better attitude on the part of the seniors toward being tested, or for both. It was decided to seek both. Another testing program for 1957 was out of the question. The chance to compare the Fellows as sophomores with seniors with practice-teaching experience was lost. The best that could be done was to prepare for a 1958 testing program and be satisfied with the opportunity of comparing the Fellows as juniors with their classmates and with seniors.

### *The 1958 Testing Program*

Although only a better test morale on the part of seniors may have been needed, no chances were taken on that being the case. In other words, it was decided to make a test designed to differentiate between juniors and seniors while bidding for a better senior attitude. With only a year for the preparation of the needed test, it was decided to be satisfied with a subjective examination, and to spend as much time as possible in getting suggestions as to content.

Letters were written to teachers in their first year of teaching,[2] asking them to tell us what they had learned from their first months of teaching, things that they had not learned from their textbooks or from their instructors while in college. Requests were also made of more experienced teachers and of principals.[3] They were asked to recall from their own observation what young graduates often have to learn about teaching, from actual experience. In addition, interviews were held, with as many potential helpers as possible.

Some of the commonly expressed opinions follow:

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[2] The letters were written to the 1957 graduates of the Glassboro, New Jersey, State Teachers College with the kind assistance of Dr. Thomas E. Robinson, President, and Dr. Lloyd V. Manwiller, Director of Student Teaching and Placement. We are very grateful for this help.

[3] In this inquiry we were indebted for assistance to Dr. S. Willard Price, Professor of School Administration, Rutgers University, who was at that time Superintendent of the Greenwich, Connecticut, public schools, and especially indebted to Dr. Samuel M. Brownell, Superintendent of the Detroit schools.

1. Teachers are not prepared to discipline. Often the college graduate hasn't faced the problem of discipline. He thinks that problems of discipline can be prevented from arising by proper planning.

2. The inexperienced teacher lacks a realistic knowledge of teaching. He has a somewhat idealistic concept of it, and knows only vaguely what it is like. He doesn't realize how many nonteaching duties are involved, how much out-of-school work is entailed, what it means to have to adapt and modify one's plans and expectations because of the local situation, what pupils of a given grade are like, what they can and cannot do, nor how different they are from one another.

3. Inexperienced teachers often create poor relationships with other teachers, with the parents of their pupils, and with the pupils themselves, by not acting wisely in the many problem situations which arise.

4. The inexperienced teacher has a preconceived idea of teaching which he thinks is the "right" way for all to follow. He has to learn from experience (if he learns it at all) that teaching is in a sense a personalized procedure. He has to discover himself in relation to teaching, in the course of teaching.

In order to permit the college student to reveal the extent to which he has matured along these lines, the following questions were drafted. In answering them, seniors with practice-teaching experience should show more maturity than juniors. The possible presence in the examination of a few non-differentiating questions was not a matter for concern, if they would help to give the examination face validity.

### *The Test Used in May 1958*

Page one was a title page, containing only some brief general directions, including a suggested distribution of the two hours of testing time among the five parts of the test, and providing spaces for name, date, etc. Part I, the only objective part, follows:

1. Rank the following from 1 to 7 according to their importance in solving the problem of discipline, starting with 1, the most important and ending with 7, the least important.

   ........ a. Show no signs of weakness.
   ........ b. Be thoroughly prepared.

........ c. Win the affection of your pupils.
........ d. Show no indecision.
........ e. Win the respect of your pupils.
........ f. Plan work that is interesting.
........ g. Allow pupils to participate in planning.

2. Check the extent to which it is possible to adapt teaching to meet individual needs.
    ........ a. It is an ideal, but little can be done in an average or larger sized class.
    ........ b. In all areas where it is important all teaching can be adapted to individual needs.
    ........ c. Under usual conditions most teaching must be aimed at group not individual needs.
3. Good teachers (frequently, sometimes, or never):
    ................ a. turn minor disciplinary occasions into jokes?
    ................ b. laugh with their pupils if something amusing happens?
    ................ c. criticize a pupil in front of the class?
    ................ d. require unquestioning obedience?
    ................ e. lose patience with a pupil and show it?
    ................ f. give in, and allow a child to have his way?
    ................ g. make a whole class suffer when the teacher does not know which pupil was the offender?

Part II was composed of eleven questions. They were spread over pages three, four, and five, in order to allow space for answers. Students were instructed to use the back of the pages if necessary, and some did. The suggested time was 45 minutes. The eleven questions follow:

1. On what bases, and for what purposes is a class broken up into small groups?
(Indicate here ........, the grade to which your answer applies.)

2. What use would you make of the cumulative records?

3. List the clerical duties involved in teaching.

4. How much of a teacher's time is taken up by clerical duties?

5. To what extent and how can clerical duties be made to yield educational outcomes?

6. Select a grade (indicate the grade here ........), and describe the arithmetic objectives for the year.

7. By the end of the year in the same grade, in what arithmetic

skills would you expect mastery by three-quarters of the pupils?

8. Select a grade (indicate the grade here ........), and estimate a minimum number of hours a teacher will have to give to planning, outside of school hours?

9. With what housekeeping items must the teacher be concerned?

10. Select a grade (indicate the grade here ........) and tell what interests pupils in this grade.

11. Select a grade (indicate the grade here ........) and describe an appropriate assignment of work which could be completed by three-quarters of the class in 20 minutes.

Twenty minutes were suggested for answering on page six the following Part III questions.

> What plans for teaching might the inexperienced teacher have, which he might find it extremely difficult to carry out where he is employed?
>
> List some limitations which might interfere with the carrying out of his plans.
>
> What compromises or improvisations might the teacher make in order to salvage as much as possible of his plans?

Part IV required the student to indicate for eight situations or occasions what might be done and also what should not be done. The suggested time was thirty minutes. The eight situations were as follows:

1. A mother asks you to give special help to her child.
2. A child is very self-conscious when called on.
3. A child's parents protest the evaluation you have made of the child's work.
4. The teacher of the grade above yours tells the principal that you are not meeting grade standards.
5. One of your pupils forges his mother's signature.
6. A passing parade distracts the attention of your pupils.
7. A certain bright pupil wants to recite all the time.
8. A pupil asks you a question which you cannot answer.

Page eight was allotted for the answering of the Part V question. It had been suggested that the student save the last fifteen minutes for this part, which read as follows:

> Assuming that teaching is creative, there must be "styles" of teach-

> ing. What ways of teaching are you best and least fitted for by reason of your personality and combination of talents?

In the administration of the test, it was decided not to make the appeal to seniors any different from that to juniors. In the same way, all students were asked to help the College give wholehearted cooperation in a research of national significance. The chief steps taken to get good cooperation were two. In the first place the examination was limited to two hours, whereas in the TEEP battery the "field" tests (two of those most related to practice) were the last and next to the last tests in a six-and-a-half-hour testing day. The main reliance was placed in the effort to write an examination that would challenge students because of its obvious relationship to readiness for responsible teaching.

At the time of the testing, late in May of 1958, copies were sent to the 1957 graduates by Dr. F. Burton Cook, Dean of the College, with the request that as many as were willing should take the examination within the specified two-hour period and return the papers to the Dean's office. This was done in order to secure an additional check upon the validity of the examination. It was assumed that if the test proved to be successful in differentiating between juniors and seniors, it would also differentiate between seniors and graduates with a year of experience. Surely the maturation which practice teaching promotes is still measurable as a result of the first year of responsible teaching. Ten teachers complied with the request, and fortunately those complying were fairly representative of the 1957 graduating class.

### *Rating Procedure*

Those responses on page two of the examination which were most frequently checked by the ten teachers were used as the scoring key for page two. Page two, being answerable by checking responses, served as an easy introduction to the examination. Pages three to eight were rated on a one-to-five scale in accordance with the following instructions:

> You are being asked to rate a part of a 6-page examination. It was given to 102 young men and women, some who have completed three years of a four-year teacher-preparation program, to some who have completed a four-year program including practice teaching but have

> had no other experience, and to some who have completed a four-year program and have taught one year. A few have betrayed the nature of their opportunity for gaining a realistic knowledge of teaching in an elementary school. Try to rate their answers as if they had not done so. The red number at the top of the examination page is an identification number. The numbers were assigned so as to randomize the location of the members of the three groups of examinees.
>
> Use ratings of 1, 2, 3, 4, and 5. Assign a single rating for the whole page. Assign a rating of "1" for the examinee who seems to be very immature professionally and seems to be poorly prepared for responsible teaching. The knowledge displayed seems bookish or unrealistic.
>
> Assign a rating of "5" if the examinee's knowledge sounds realistic, as if it were obtained from first-hand experience, and as if the examinee were ready for responsible teaching. Use "2" for the examinee close to deserving a rating of "1," use "4" for one close to deserving "5," and use "3" for those in-between.
>
> Be on the lookout for answers continued on the back of the page.
>
> Do not record your ratings on the examination page. Such a record would prejudice the rating of the other raters. Record your rating on the sheet provided.
>
> It is suggested that you read a half-dozen or so of the papers either in order or scattered throughout, without rating them. This will give you some idea of the differences you will find. Then start rating by sorting the papers into five piles, corresponding to the five ratings. Not having recorded anything it is easy for you to modify your ratings simply by shifting papers. Do not be concerned about preserving the order. When you have sorted the 102 papers in five piles to your satisfaction, then record the ratings one pile at a time.

The following additional instructions were given to the readers in connection with the rating of page eight:

> You may wonder about the value of page eight. It was included in the examination because of the belief that students and young teachers know their own strengths and weaknesses and interests in proportion to their experience in the classroom.
>
> In other words, rate page eight, not as to how well the person fits a preconceived pattern which you may prefer in teachers, but for the extent to which he seems to have a realistic knowledge of himself in relation to teaching.

## Ratings for page ........

Rater's name ......................................................................

Date ....................................................................

| *Ident. No.* | *Rating* | *Ident. No.* | *Rating* | *Ident. No.* | *Rating* | *Ident. No.* | *Rating* |
|---|---|---|---|---|---|---|---|
| 1 | | 26 | | 51 | | 76 | |
| 2 | | 27 | | 52 | | 77 | |
| 3 | | 28 | | 53 | | 78 | |
| 4 | | 29 | | 54 | | 79 | |
| 5 | | 30 | | 55 | | 80 | |
| 6 | | 31 | | 56 | | 81 | |
| 7 | | 32 | | 57 | | 82 | |
| 8 | | 33 | | 58 | | 83 | |
| 9 | | 34 | | 59 | | 84 | |
| 10 | | 35 | | 60 | | 85 | |
| 11 | | 36 | | 61 | | 86 | |
| 12 | | 37 | | 62 | | 87 | |
| 13 | | 38 | | 63 | | 88 | |
| 14 | | 39 | | 64 | | 89 | |
| 15 | | 40 | | 65 | | 90 | |
| 16 | | 41 | | 66 | | 91 | |
| 17 | | 42 | | 67 | | 92 | |
| 18 | | 43 | | 68 | | 93 | |
| 19 | | 44 | | 69 | | 94 | |
| 20 | | 45 | | 70 | | 95 | |
| 21 | | 46 | | 71 | | 96 | |
| 22 | | 47 | | 72 | | 97 | |
| 23 | | 48 | | 73 | | 98 | |
| 24 | | 49 | | 74 | | 99 | |
| 25 | | 50 | | 75 | | 100 | |
| | | | | | | 101 | |
| | | | | | | 102 | |

Three readers did the rating. One reader, an experienced elementary-school teacher with whom students are placed for practice teaching, rated pages four to seven inclusive. The second and third readers, both supervisors of practice teaching, rated pages three, four, seven, and eight. None of the readers had any connection with the Danbury State College, and none had had any previous connection with the Yale–Fairfield Study of Elementary Teaching.

### *Reliability*

The intention was to secure ratings until a fair degree of objectivity was secured. These first twelve ratings proved to be sufficient. Reliability was measured by comparing scores on half-tests. The first half was composed of the top of page two and the ratings of the odd-numbered pages. The other half was composed of the score on the bottom of page two and the ratings on the even-numbered pages. The reliability coefficient was .68 for the whole examination. Although the examination was separated into single pages and seen by raters only one at a time, there was the possibility that a "halo effect" (rating because of remembered impressions) may have operated to influence the .68 obtained. As a check on this possibility, four of the twelve rating were discarded for a new computation of agreement between halves. By discarding four ratings, one-half was so selected that only reader one influenced it, the other so that only readers two and three influenced it. The first half was composed of the bottom of page two and pages four to seven; the second was made up of the top of page two and pages three and eight. This time the reliability coefficient for the whole examination was .72, and we may therefore conclude that the coefficient of approximately .70 is not spuriously high because of a "halo effect."

### *Validity*

The test proved to have the validity sought as a test of teaching readiness. Average scores were as follows:

| | *Ability Index* | *Readiness Score* |
|---|---|---|
| Juniors (class of 1959, N=36) | 57.9 | 122.4 |
| Seniors (class of 1958, N=36) | 57.9 | 133.4 |
| Graduates (class of 1957 with one year of experience, N=10) | 58.9 | 145.4 |

The test needed only to be valid enough for differentiation between groups, but it may also be said to have some validity concerning individuals. There was a statistically significant correlation (rho) between rank of scores and rank based upon pooled observations of the Fellows in classroom situations.

### *Readiness of the Fellows to Teach*

The average scores for the Fellows and for their junior and senior control groups are shown below:

| | *Ability Index* | *Readiness Score* |
|---|---|---|
| Fellows, as juniors (class of 1959) | 79.5 | 147.8 |
| Junior control group (class of 1959) | 79.5 | 131.0 |
| Senior control group (class of 1958) | 79.0 | 147.8 |

The difference between the average for the Fellows and the average for their classmates is 2.1 times its standard error. According to these scores on the readiness examination, the Fellows at the end of their junior year were as ready for responsible teaching as were seniors of similar ability. Again according to the scores, both they and their senior controls, being of superior ability, were as ready as the average graduate with one year of experience. Perhaps an examination such as the one used might serve as a basis for providing differential and more appropriate kinds of experience in the senior year.

## C. The College Record

The Danbury State College curriculum is composed of 138 semester-hours of work, 128 of which are earned in required courses.[4] With only 7 per cent of the curriculum elective, there could not be large differences in curriculum between the Fellows and their controls. Such differences as did obtain are shown below in averages to the nearest whole numbers.

Not only are the differences small, but they do not correspond well to the differences in GRE test scores reported in the section

[4] *Danbury State Teachers College Catalog, 1958–1959*, p. 26.

*Average Number of Semester-hours Taken*

| *In* | *By Fellows* | *By Controls* |
|---|---|---|
| English | 23 | 20 |
| Mathematics | 6 | 6 |
| Natural Science | 13 | 12 |
| Social Science | 23 | 27 |
| Music and Art | 16 | 15 |
| Physical Education | 11 | 12 |
| Professional courses ("Education" courses)[5] | 46 | 46 |
| *Totals* | 138 | 138 |

above on Liberal Education. In other words, the differences in electives provide no basis for attaching significance to the differences in score shown there and reported as statistically insignificant.

Although the Fellows and their controls made about the same average GRE test scores (488 and 482), the Fellows received higher marks for their work. This is shown below, where the Fellows are compared with their controls as to centile ranks based on marks, and in the second column as to centile ranks based on GRE test scores. In the former comparison the reference group is their own graduating class; in the latter it is the normative group of women graduating from liberal arts colleges.

*Distributions of Centile Ranks*

|  | BASED ON MARKS |  | BASED ON GRE TEST SCORES |  |
|---|---|---|---|---|
| *Intervals* | *Fellows* | *Controls* | *Fellows* | *Controls* |
| 81–100 | 7 | 1 |  | 1 |
| 61–80 | 1 | 4 | 2 | 1 |
| 41–60 |  | 1 | 4 | 4 |
| 21–40 |  | 1 | 2 | 1 |
| 1–20 |  | 1 |  | 1 |

The table shows that both the Fellows and their controls were average among liberal arts college women, as measured by the GRE Area tests, but that they ranked above average within their own class at Danbury. The table also shows that seven of the eight Fellows were graduated within the top 20 per cent of their class, whereas only one member of the control group received this recognition. Why did the Fellows receive higher marks than were made by their controls?

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[5] The forty-six semester-hours are 33 per cent of the total.

The Fellows earned many of their credits in summer sessions and in Fairfield. The facts are as follows.

*Average Number of Semester-hours (to the nearest whole number)*

|  |  | FELLOWS |  |  |  |
|---|---|---|---|---|---|
|  | CONTROLS | *During Semesters on Campus* | *While working in Fairfield* | *In Summer School at Danbury* | *Totals* |
| Freshman year | 34 | 17 | 3 | 8 | 28 |
| Sophomore year | 36 | 20 | 3 | 10 | 33 |
| Junior year | 34 | 19 | 15 | 9 | 43 |
| Senior year | 34 | 17 | 17 |  | 34 |
| Totals | 138 | 73 | 38 | 27 | 138 |

One possible explanation of the higher marks made by the Fellows is therefore that it was easier to make higher marks in summer session or in Fairfield or in both.

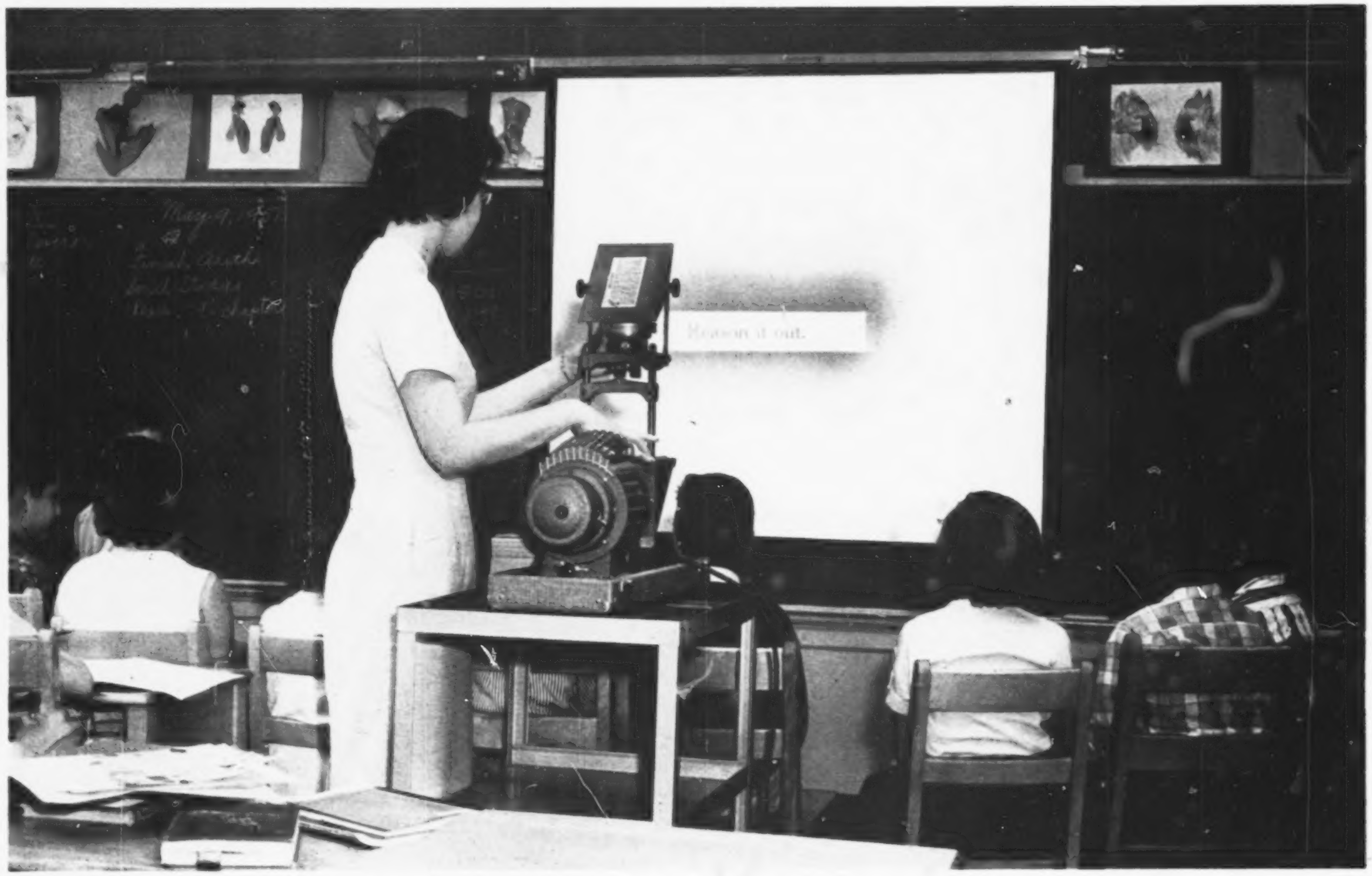
Another possibility is that the work experience of the Fellows contributed or applied to certain of the courses taken. Below is a breakdown of average marks, both as to where the work was done and also in relation to subject-matter area. A's, B's, C's, and D's were called 4's, 3's, 2's, and 1's for averaging.

*Average Marks*

|  | FELLOWS |  |  |  |
|---|---|---|---|---|
|  | *Fairfield* | *Summer Session* | *During Academic Year* | CONTROLS |
| English |  | 3.8 | 3.2 | 2.8 |
| Mathematics |  | 3.6 | 3.2 | 2.3 |
| Natural Science |  | 3.3 | 2.7 | 2.6 |
| Social Science |  | 3.6 | 3.2 | 2.9 |
| Music and Art |  | 3.9 | 3.7 | 3.4 |
| Physical Educ. | 3.7 | 3.7 | 2.6 | 2.4 |
| Education | 3.6 |  | 3.4 | 3.1 |

It is apparent that no single area or group of subjects was responsible for the higher marks received by the Fellows. No weighting or lack of it was responsible for the fact that the Fellows were graduated with higher rankings than those earned by the control group.

The Fellows did receive higher marks for the work they did in Fairfield and also for work done in summer sessions than for work done on the campus during the academic year. In both cases the


Reason it out.

Use of audio-visual techniques is part of the Fellow's preparation for teaching.

As training in physical education work with children four Fellows develop a circus project.

higher marks could indicate better work or more lenient marking.

Why did the Fellows average nearly one-half of a grade point higher than their controls in work done at Danbury during the academic year? Was the ability index on the basis of which Fellows and controls were matched of such a nature as to equate the groups well for the securing of objective test scores but not for the securing of marks? This could be the case. The index of ability used was composed of three objective test scores and rank in the secondary-school graduating class, with equal weights. When the centile ranks in the secondary-school graduating class were compared by themselves, it was found that the average for the Fellows was 91.5 and for the controls, 89.5. However, though favoring the Fellows, this difference seems hardly large enough to account for the marked differences reported above. Furthermore, the higher marks were made by the Fellows in spite of the fact that three of the group had to begin some year courses in the middle of the year, and take some sequences in the reverse order. Data are not available for an explanation of the higher marks. Perhaps the higher marks reflect more mature and responsible attitudes and work habits on the part of the Fellows. On the other hand, possibly their instructors were influenced in their marking by the mere fact that these girls had been awarded fellowships.

The important observation to be made is that the Fellows secured their superior practical training without loss of progress in other areas of teachers college education, either as it is measured by the GRE Area Tests, or as it is usually evaluated at the Danbury State College.

### *Participation in Extracurricular Activities*

Judging from the record as it appears in the office files at the College, it would seem that in spite of handicaps the Fellows were not seriously deprived of college life. The lists of activities participated in by the Fellows on the one hand, and by the control group on the other, were very similar. There were differences, but they pointed in one direction about as often as in the other.

For instance, more control girls participated in chorus or the "sings," served on the Dance Committee and on the Dormitory

Council, and worked on the Junior Production and on the Yearbook. But on the other hand, more of the Fellows were members of the International Relations Club, held offices in Kappa Delta Pi, were Student Government Representatives, or engaged in some kind of outside-of-college community activity, and more worked on the college paper.

Although the activities participated in were as numerous and varied for the Fellows as for the controls, we cannot conclude from this record that participation in extracurricular activities by the Fellows was not affected by their work program. They were with their classmates only five-eighths of the time.

## D. Faculty Reaction

Faculty reaction concerning the experimental addition of off-campus work-experience to the Danbury College program was asked in two ways. First, each member of the Faculty was given an alphabetical list of sixteen girls (the eight Fellows and the eight in the control group) and asked to supply the Directors of the Yale–Fairfield Study with any observations concerning the sixteen girls that might supplement the data in the files of the College offices. Second, the Dean of the College was asked to assemble a Faculty appraisal of the experimental program. Through him the Faculty was asked, "How did the experiment work? In what ways would you modify the arrangement in order to improve the education and training of the students involved? If desirable, is such an arrangement feasible as a regular part of the College's program?" These questions were followed by a list of more detailed questions which were offered as suggestions for consideration. The suggested questions are reproduced below.

### *The Suggested Questions*

Was the on-campus learning of liberal arts content affected—for instance, (a) made more difficult, (b) lessened because of absences from the campus, (c) better motivated by a seeing of the need for it in teaching?

Was more learned from education courses because the Fellows could bring to them a background of experience in the classroom? Did the experience as Assistants contribute to teacher preparation over and above what practice-teaching generally provides? For instance, (a) did the Fairfield girls acquire more familiarity with elementary schools and teaching, (b) did they acquire a better understanding of children, (c) did they develop more versatility, flexibility, confidence, or poise?

Did the experience as Assistants make teaching seem more or less attractive? What is the optimum amount of off-campus teacher-assistant work-experience? When, during the college years, is it best to provide it? What are the pros and cons concerning the provision of some off-campus class or seminar work along with the teacher-aide work-experience? Should those who spend time off-campus in teacher-aide work-experience have a different college program? If they should, in what ways should the program differ? Can teacher-aide work-experience be planned which is educationally desirable and at the same time possible within the existing college budget? For instance, for which and for how many of its students could the college most profitably, economically, and efficiently provide for off-campus work-experience?

### *Faculty Opinion of the Fellows as Students*

In answer to the above questions some of the instructors observed that the Fellows had done very well, considering the broken-up program they had, but in general it was not thought that the liberal arts work was made more difficult for the Fellows by their work in Fairfield. The only department that was not satisfied with the Fellows' accomplishment was the Physical Education Department, which felt that because of the disjointed program the Fellows did not have adequate preparation in Physical Education. On the other hand, an instructor in English, when given the alphabetical list of sixteen girls, picked nine as "alert, perceptive, eager to accept responsibilities, willing to show leadership, highly responsible, well liked by classmates, extremely active in college affairs, and intellectually sound." Six of the Fellows were among the nine. The other two were among the seven listed as "conscientious and responsible, but average."

Everyone was greatly impressed with the native ability of the Fellows. One instructor said, "The desirable aspect of the arrangement was in getting these bright girls on the campus. I'd approve of any kind of progam that would attract more students like these."

However, the Faculty did not credit the off-campus work itself with having been responsible for the good liberal arts work done by the Fellows. One instructor expressed it as follows: "I have the feeling that the Yale–Fairfield girls were motivated in liberal arts work chiefly because they were girls who had natural intellectual interests to begin with. Also, the girls knew they were part of an experiment, they knew that much was expected of them, and they knew that the eyes of many people were on them."

### *The Problem of Belonging in College*

The Faculty was strongly of the opinion that there was a motivation on the part of the Fellows which may have prevented them from revealing an awareness of the relationship between their college work and their work in Fairfield. Their most obvious motivation was to achieve the status of the regular college student. They had the problem of being set apart. Each one tried hard to overcome this handicap so as to be accepted "as one of the students." They wanted status on other grounds than that of being a part of the Yale–Fairfield Study.

At the outset, the desire "to belong" may have overshadowed some of the values which should have come from participation in the Yale–Fairfield program. Some instructors were sure that the Fellows could have enriched the class discussion with their experiences, and would have done so but for their unwillingness to draw attention unnecessarily to that which set them apart from the other students. In this effort to belong, they were, in time, fairly if not quite successful. It was largely during the first two years that their efforts may have prevented them from using their Fairfield experiences in class discussion. Their attitude changed during the last two years. By that time, they seemed to be seeking status by drawing on the superiority of their off-campus activities.

Looking back over the four years, an instructor in English thought it "remarkable, under the circumstances, that the Yale–

Fairfield girls fitted in so well, and contributed so much to campus life. They pitched into campus activities the moment they returned from their off-campus work. They were the breath of life for several student organizations which otherwise might have languished.—One, brimful of vitality, cheerful and extroverted, was in the middle of almost every curricular and extracurricular activity."

### *Professional Preparation*

There were only two education courses taught entirely on the campus. Three others were given on campus one semester and in Fairfield the other, while several others were given in Fairfield, along with the work-experiences, by members of the staff of the Yale–Fairfield Study. When taking their first education courses on the campus, the girls were still in their "quiet stage" and made no contribution to the discussion. By the time they were taking the later courses the Fellows had had two or three semesters of work and study in Fairfield, and they were highly identified with Fairfield and the Assistant Director of the Yale–Fairfield Study there. They judged everything they considered in Danbury in the light of Fairfield policy and practice. One instructor pointed out that the Fairfield situation is a rather "plush" one, and that therefore, by rejecting all that did not apply to Fairfield, the Fellows were rejecting a preparation for meeting the needs of underprivileged children. This instructor thought the Fellows were less flexible in their thinking than any students he had ever had.

On the whole, the large amount of work-experience did not show up to advantage in the theory courses in Danbury. The girls seemed not to have related practice to theory. It was felt that they had had an apprenticeship-like experience rather than having acquired an intellectual or generalized understanding of teaching.

On the other hand, the Fellows became cognizant of the teaching process early. It was obvious that they were observing their college teachers with an interest in the teaching process. The girls early assumed the perspective of the teacher rather than that of the college student in considering problems. Their work-experiences had given them a more realistic understanding of the role of the teacher.

No member of the Faculty had any impression that the girls' work-experiences had made teaching seem less attractive. Some thought it may have made it more attractive. Opinion was that the outstanding gain was in giving poise and confidence. This was demonstrated when one of the Fellows was requested to take charge of one of the laboratory school classes because of the illness of the regular teacher. The Fellow did it without "turning a hair," showing the influence of her three semesters as a teacher-aide.

### *Administrative Considerations*

In the opinion of the Danbury Faculty two semesters, one in the junior year and one in the senior year, is the optimum amount of off-campus work-experience. This opinion is based upon a consideration of the need of the students to become well established in the college. Also, it is thought that the smaller amount and the postponement of that amount should help to prevent the students from making too close an identification with the school system in which they work. In a program providing for more than two semesters of work-experience, the work should not be all in one community.

But whether composed of two or more semesters, someone from the college should direct the work-experience. This is not a criticism of the Assistant Director of the Yale–Fairfield Study who did supervise the work of the Fellows. On the contrary, it was in part due to the fact that she is an excellent teacher and very personable, that she and the Fairfield teachers whom the Fellows assisted presented such a solid front of principle and practice that the girls were not adequately exposed to divergent opinion and practice.

Whether the existing Danbury program would need to be modified in order to provide regularly for teacher-aide work-experience depends upon the amount of such experience called for in the program. If it seems best, as indicated above, to provide only two semesters—one in the junior year and one in the senior year—then the present Danbury program could be followed. But if more than two semesters of off-campus work are involved, then the on-campus program should be modified for the students involved. Many of the liberal arts courses now required during the first two years could profitably be postponed and replaced by courses like Children's Literature, having a more direct bearing on the work-experience.

In the present experimental program no modifications were made in the Danbury program in order to relate on-campus work to work done in Fairfield.

The cost to a college of a program of teacher-aide work-experience should not be prohibitive. There are complications, such as dormitory fees and transportation of both faculty and students. But if the local Board of Education in the cooperating community provides the students with their Fellowships as payment for the teacher-aide service rendered, it would seem that the major factor would be to have the number of students in the program equal to twice the size of a college section. At Danbury that would mean having about thirty students in the program (assuming that they would need to work in pairs, one in college while the other was working as an aide, with roles reversed in the middle of the year). In that way there would be fifteen students in any class conducted off-campus or offered in the summer session for the teacher-aide students. In the present experimental program, in which only four students had common needs, no classes were set up just for girls in the Yale-Fairfield Study. Consequently, the girls were scheduled with uneven work loads and some reversals of sequence, but as nearly as possible for the regular Danbury program.

## E. STUDENT OPINION

The Fellows were asked to tell in writing, in what ways the Experimental Program could have been improved so far as they were concerned. The members of the Control Group were asked to tell what they thought of the Program. Fifteen of the sixteen girls were also interviewed.

### *Suggested Improvements*

Four of the Fellows thought they would have profited from a greater variety of work-experience, from working at more grade levels, and from helping the specialists. Two of these four, as the Faculty did, thought they would have profited from experience in other school systems.

Four of them spoke of the gap between their on-campus and off-campus experiences. They were not so much agreed on how it might have been reduced as on the need for reducing it in some way through better planning. Possibly they sensed that the gap was larger than it would have been if the program had been initiated and planned by the Danbury faculty.

Six of the Fellows thought the irregularity of their schedules was due to the smallness of Danbury State College. They thought that in a larger institution they could have taken the courses they needed when they needed them, and would have been less restricted in their choice of electives.

Without exception, they thought it would have been better for them if they could have waited until their second year to begin their teacher-aide work. They did not indicate whether they would have preferred this arrangement if in doing so they had also postponed receiving their Fellowships. In suggesting that the work-experience begin in the second year, one wrote: "A full first year on the campus would have helped tremendously. Every college students needs to become part of his class and to establish his relationships with each of his classmates. He needs to feel that he is like the other members of his class." Another said that they should be close enough to the college to permit fuller participation in campus activities, and a third thought they should live on the campus.

### *Participation in Activities*

A classmate of the Fellows thought "that these girls have missed out on many activities necessary to a wholesome college life. They either participate in an activity for the first semester and then have to drop out, or they have to begin in the second semester having missed all of the preliminaries. Also, at Danbury they have been 'pegged' as the Fairfield Group and have seldom been known individually. These girls have not really become a part of our class."

Another classmate noted instances when Fellows were nominated and it was objected that they were not well known and could not fulfill the obligations of the office because of their being away half of the year. This attitude was expressed by still another classmate as follows: "Because they were here only part of the year, many offices that they would have filled successfully, were not made available to them—I feel that the girls missed a great deal of college life. At times, at a sacrifice, they traveled from Fairfield to Danbury for rehearsals and meetings but they still seemed to miss a great deal."

Only part of the handicap the Fellows faced in participating in the life of the College was due to absence from the campus. As one classmate described the situation:

> Only close friends of the Fairfield girls knew what they were doing. Other members of the class heard only parts of the story; two years of teaching, $1000 a year, high IQ's, etc. Because of this, through no fault of their own, the girls were misjudged at times. When they returned to the campus, many members of the Faculty emphasized their advantages and called upon them with reference to them as members of the Study rather than as individuals. Some students felt that the Faculty members were insinuating that the Fairfield girls were superior to the other students. The other students resented this, and it placed the Fairfield girls in an awkward position.

It is not surprising to find the further observation that "the Fairfield girls stick together quite a bit. However, this was especially noticeable when they entered in January. They became more social as the year progressed." One classmate expressed a firm dissenting opinion. "I do not believe that they have lacked extracurricular activities, since none of them are shy or withdrawn. They have joined clubs, and committees when they were on-campus, and worked diligently on them." Another classmate was of the same opinion. "I don't think the girls lost anything by taking part in the Study. They participated in as many extracurricular activities as other students, possibly more. Any losses they may have incurred were more than compensated for by the new and interesting experiences they had."

### *Professional Preparation*

There did not seem to be any doubt among the classmates that the Fellows' work-experience had been valuable. The one who thought the Fellows had missed many activities necessary to a wholesome college life distinguished in her remarks between what is good for a student and what is good for a future teacher. Concerning the latter she wrote, "I think that these girls have had priceless experiences, spending so much time working in classrooms. Knowledge, attitudes, and methods were gained by them that greatly surpass those learned through lectures or during our comparatively short training periods."

The top-ranking member of the control group wrote as follows concerning the Fellows:

> The girls are ready in nearly every class with answers and ideas. Their talk outside of classes is on a more mature and more professional level than that of most of us. This, I believe, is because they have had much more experience. They have been in schools where the children and staff looked upon them as real teachers. They were there long enough to feel as though they were teachers. They are aware of the real problems a teacher faces, and have taken responsibility for children's growth over extended periods of time. On the whole, I think the Yale-Fairfield preparation was far superior to the ordinary college preparation. There were difficulties for these girls, but I think the benefits far outweighed them.

The Fellows themselves were not asked what they thought of the program as a whole because their answers could have been attributed to a sense of obligation. However, they volunteered appreciative comments along with their suggestions for improvement. One, after making her suggestions, added: "Looking back on our four years, these things [faults] seem so insignificant. It has been a magnificent experience." Others commented as follows:

> On the whole the program was profitable.
>
> The past four years have been most valuable to me as a future teacher.
>
> My experience in the Yale-Fairfield Study has been a most rewarding and exciting one.
>
> I especially valued being able to observe the children whenever I had a free minute. That is something that is hard for a teacher to do, because she is always in the midst of something.
>
> This experience has done more for me than anyone could ever imagine. In many ways, I am deeply indebted to the teachers with whom I have worked.
>
> Working so closely with the children has brought many good and

rewarding feelings, and made me even more anxious to become a teacher. Their asking me to help them with something they were doing always made me feel good and useful.

My choice of teaching as a career has been more fully strengthened. I'm sure that I shall be very happy in teaching.

### F. The Fellows as Beginning Teachers

In June 1959 the eight Fellows whose program of teacher education is described in this report were graduated from Danbury State College with the degree of Bachelor of Science. They were then eligible for the preliminary certification to teach in the elementary-school grades in Connecticut or elsewhere in states where certificates to teach granted by the State of Connecticut are accepted. As is the case with all college seniors in these days of high demand for teachers, the Fellows began to investigate teaching opportunities early in the semester prior to graduation.

The Fellows had been informed at the time of their selection that this did not obligate them to teach in Fairfield at the termination of their program of preparation. They were free to seek teaching positions wherever they chose. The school system of Fairfield in cooperating in the Yale–Fairfield Study shared the concern of the Study in improvement of teacher preparation. The securing of new teachers for the Fairfield schools was not the basis for the involvement of the school system, although it proved to be a sort of beneficial by-product of such participation. The person in charge of recruitment of new teachers stated that he would have welcomed all eight of the graduates of this program, whose performance in the schools had been observed over the whole period of their undergraduate preparation.

Five of the eight Fellows, however, did apply for teaching positions in Fairfield and were given appointments for the school year 1959–1960. The remaining three Fellows made applications and were appointed to teach in other communities—one in Westport, Connecticut, one in Ridgefield, Connecticut, and one in Newton, Massachusetts. All eight entered on their first professional assignments in September 1959. One of the eight, the only one who was married, was granted a maternity leave in the Spring of 1960. The other seven will complete their first year of teaching in June and have been recommended for renewal of contract in the systems employing them.

Since a purpose of this project was to evaluate the quality of the preparation for teaching obtained by students in the program, efforts were made to secure evidence concerning the performance of the former Fellows in their first year of teaching. A uniform method of evaluation was needed for an assessment of their work as beginning teachers.

An evaluation instrument based on the major categories of teaching tasks defined by the Yale-Fairfield Study in its preliminary research[6] was drawn up and submitted to the supervisors most directly concerned with the graduate who was to be evaluated; in all cases this was the supervising principal of the school. The evaluator was asked to rate the former Fellow in comparison with other beginning teachers as superior (1), above average (2), average (3), below average (4), or poor (5) in each area of professional work. The items on which the former Fellows were rated and the number of them who received each rating are shown below:

| | *Superior (1)* | *Above Average (2)* | *Average (3)* | *Below Average (4)* | *Poor (5)* |
|---|---|---|---|---|---|
| 1. Planning the day's work and developing appropriate curriculum materials | 4 | 4 | | | |
| 2. Organizing, initiating, and directing learning activities | 4 | 4 | | | |
| 3. Using appropriate teaching materials, tools, resources in instruction | 3 | 4 | 1 | | |
| 4. Differentiating the curriculum in terms of different levels of needs of pupils | 2 | 5 | 1 | | |
| 5. Communicating effectively with children—informing, explaining, showing how | 2 | 6 | | | |
| 6. Establishing and maintaining a wholesome classroom climate | 5 | 3 | | | |

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[6] Yale–Fairfield Study, *Report, 1954–1955,* Chapter 5.

An Indian baby is a papoose
An Indian woman is a squaw
An Indian drum is a tom-tom
An Indian boat is a canoe
An Indian hatchet is a tomahawk
tent is a wigwam
or a teepee
Kennard's Group
Day In and Day Ou
Group
Lot in the Hat

In second grade young readers use large charts under the Fellow's guidance.

The playground provides many a teaching-and-learning opportunity.

|  | Superior (1) | Above Average (2) | Average (3) | Below Average (4) | Poor (5) |
|---|---|---|---|---|---|
| 7. Observing and diagnosing individual learners and their problems |  | 7 | 1 |  |  |
| 8. Assuming responsibility for the physical aspects of the classroom as a settting for learning | 5 | 2 | 1 |  |  |
| 9. Promoting purposeful, productive, and zestful group activities | 4 | 4 |  |  |  |
| 10. Evaluating the work of individuals and groups |  | 7 | 1 |  |  |
| 11. Making reports to parents or to principals on pupil progress | 2 | 6 |  |  |  |
| 12. Accepting whole-school responsibilities, i.e. assemblies, committee work, school-wide tasks | 3 | 3 | 2 |  |  |
| 13. Contributing to closer relationships between school and community[7] | 2 | 4 | 1 |  |  |
| 14. Evidencing continued professional growth and rich personal living[7] | 2 | 3 | 2 |  |  |

It is recognized that the validity of such ratings as these is open to serious question because of the likelihood that the several raters will apply several different standards. Since the time and resources available did not permit the use of techniques to assure maximum uniformity in the application of a single well-defined standard, the results are at best merely an indication of the degree to which the former Fellows found acceptance in the eyes of their immediate superiors in the latter half of their first year of teaching. That question, however, can apparently be answered with a strong affirmative.

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[7] One supervisor did not rate the former Fellow on items 13 and 14 because he did not consider himself well enough informed.

# IV

# THE FELLOW PROGRAM VIEWED AS SERVICE IN A SCHOOL SYSTEM

## A. The Fellow's Job

### *Nature of the Job in Relation to the Experiment*

In the description of the experiment in the preceding chapter little was said of the nature of the job the Fellows would be expected to fill. One of the assumptions made at the outset was that although it might be possible it would not be desirable to define the job in advance and set up prescribed conditions as to the manner in which the Fellows' services might be used. Rather, it was thought that the role should be allowed to evolve within a natural setting, the characteristics of which, of course, would be reported. Thus the gradual development of a clear job pattern was regarded as an anticipated outcome of the experiment rather than as an experimental condition to be set up in advance.

From another point of view, however, the nature of the job does appear as an experimental condition. When we begin to consider the effect of the program as a whole on pupil progress, on the professional tasks of the cooperating teachers, and on professional preparation of the Fellows themselves for teaching careers, the kinds of activity they carried on as teacher helpers are an important part of the total condition the consequences of which are to be evaluated. Thus the description which follows must be conceived in its dual relationship: the role of the Fellow evolved as a result of other conditions which were more or less controlled for the purposes of the experiment, but this role, in turn, had further consequences the assessment of which was also an important objective of the study.

### *Fellows and Teacher Assistants*

Simultaneously with the beginning of the Fellow Program in the fall of 1955 another experimental group, designated as "Teacher Assistants," began similar work assignments in Fairfield. The Teacher Assistant Program is more fully described elsewhere,[1] but certain points of comparison will be instructive. The Teacher Assistants were recruited not as potential students in a program of preparation for teaching but simply as people who might serve effectively as helpers and who might find enough satisfaction in such work to make a career of it. Less emphasis was placed on scholastic ability and general background for teaching in the selection of this group and more emphasis on characteristics that seemed most conformable to the objectives of that program. The Teacher Assistants were assigned on a school-year rather than a semester basis and some of them worked with several teachers in a "multiple faculty plan," but despite these differences the positions they occupied as teachers' helpers were much like those occupied by the Fellows. The same policy of letting the role evolve freely was applied to both groups. Because of their differences in background and because the Fellows were students as well as assistants, it was anticipated that the roles of the two groups as teachers' helpers might develop differently.

### *Relation of New Roles to Role of the Teacher*

Naturally the evolution of any new role will be largely guided by the structure and function of the social institution in which it takes place and by the existing roles that impinge most directly upon it. If the helper, whether a Fellow or a Teacher Assistant, is to render useful service to a teacher, the service must somehow contribute to the teacher's functions in the school and to the school's functions in society.[2] The specific activities that constitute the "helper's job" derive rather directly from those of the teacher, with the obvious restriction that they must be suited to the abilities of a person lacking the full professional training that the teacher is expected to have. An important key, therefore, to the evolution of either of these subordinate roles is the role of the teacher herself.

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[1] See Yale-Fairfield Study of Elementary Teaching, *Teacher Assistants* (New Haven: The Study, 1958).

[2] For a full discussion of these two topics, see Yale-Fairfield Study of Elementary Teaching, *Report: 1954–1955* (New Haven: The Study, 1956).

### *Analysis of Teacher's Role and Its Implications*

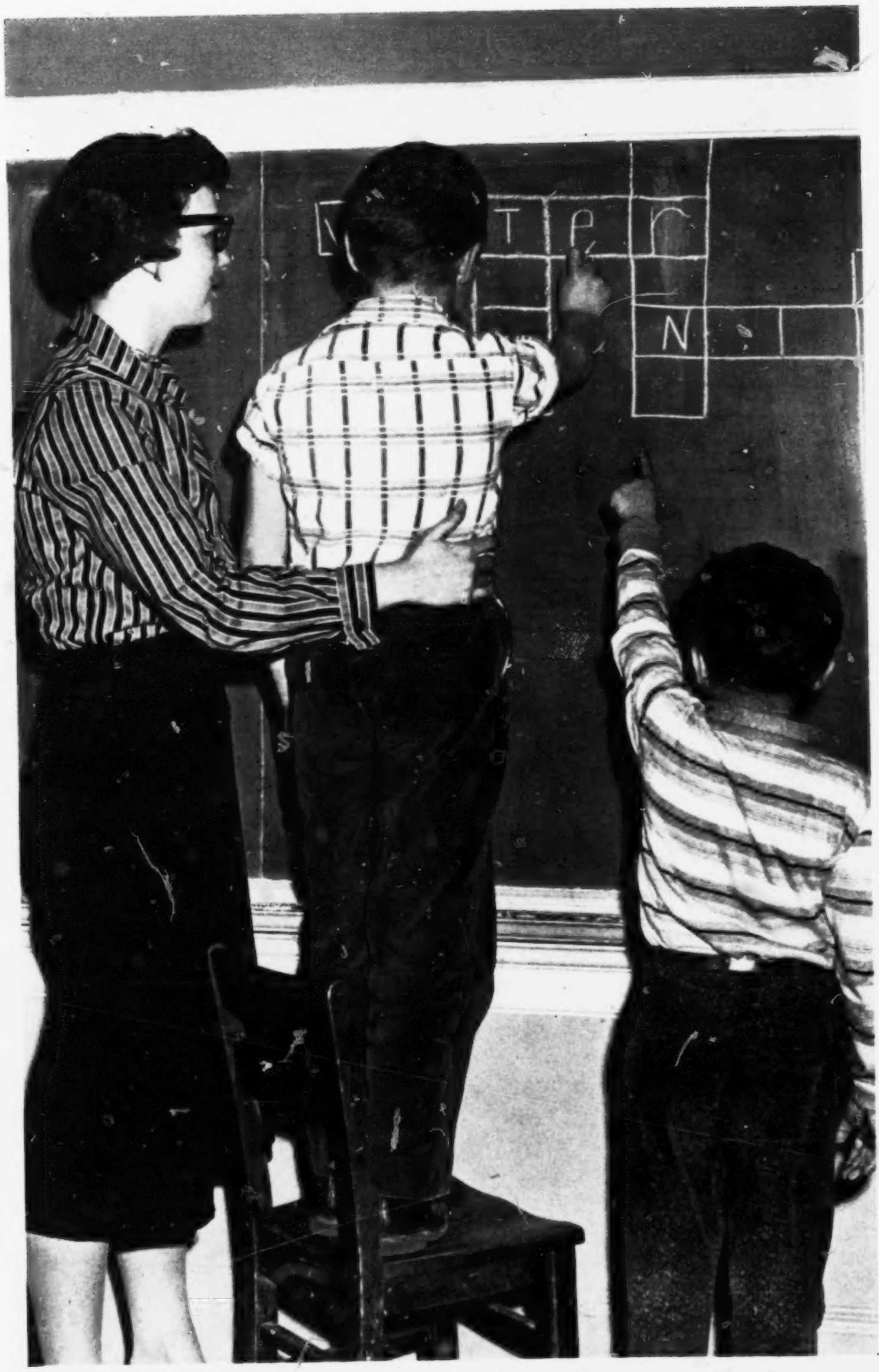
Traditionally the teacher has been regarded as the person mainly responsible for pupil learning of certain prescribed subject matter. While retaining this function, modern society has attached increasing importance to the teacher's subsidiary duties as the person mainly responsible for the well-being of pupils while they are under the school's jurisdiction. We are asking today's teachers, as it were, to be not less proficient as teachers but more proficient as child-welfare workers than ever before. Some of the implications of the teacher's role in the modern school for the development of a new role as teacher's helper are as follows:

1. *Instruction.* As a person charged with responsibility for pupil learning of a broad range of subject matter the elementary teacher must be a generalist, well-versed in all the common branches of knowledge and able to interpret the culture as a whole to children of a given age level. Because of the diversity of the material and because so much of it is held in common by all educated adults, many of the easier parts of it fall well within the competence of a suitably chosen assistant. If in the teacher's judgment responsibility for certain types of activity may properly be delegated to the assistant, the chances are good that the assistant's background of general knowledge will be adequate for them. There are simple as well as complex aspects of "interpreting the culture," and some of the simpler aspects may well be delegated.

2. *Group leadership.* In a typical elementary school the teacher has general charge of a group of from twenty to thirty-five pupils and hence must, with the children's assistance, plan and direct many types of group work as well as many individual activities. Often organization for effective group work in a class where individual talents and abilities are varied requires the establishment of several subgroups for particular purposes. Although such small groups can

1 6 nickels
5 3 dimes

Small-group leadership, a typical teaching function, can often be delegated to a Fellow.



Individual attention is often needed, especially by pupils who require extra amounts of kinaesthetic experience.

sometimes function well without close supervision by an adult, there are often times when they need support to keep from "falling apart" or outside impetus to maintain headway, and thus the availability of an assistant to work with small groups in various ways may be helpful both to the teacher and to the pupils.

3. *Individual attention.* The most profitable use of time by pupils working at individual assignments demands that they receive personal attention from the teacher from time to time. Even if the teacher has a large class, he or she must somehow manage to give enough individual attention to each pupil to help him along the path of learning when he really needs to be helped. Ideally the teacher's decision *not* to help a pupil at a given point should rest upon the judgment that leaving him to puzzle the matter out for himself will be truly beneficial to him rather than being an inevitable result of the teacher's lack of sufficient time. By careful organization and planning competent teachers are able to provide time for direct personal attention to the learning problems of all their pupils, but in most situations more time could be so used to good advantage. Thus the availability of an assistant either to help individual pupils directly in some cases or to relieve the teacher of other activities so that he or she may devote more time to working with individual pupils may be very useful.

4. *Supervision.* Because of the teacher's responsibility for children's general welfare, he or she must provide adequate supervision for them all through the school day. Not only the health and safety of the pupils but also their social and emotional needs demand that the teacher keep constantly alert and ready to deal wisely with each situation as it occurs. This is an important phase of teaching, an activity that aids and abets pupil learning both directly and indirectly. Despite its importance, however, much of the supervisory work is of a rather routine nature. Without relinquishing the responsibility for its accomplishment to the extent and in the manner that best serves the pupils' needs, the teacher may decide to delegate some part of this work to an assistant who is capable of handling it.

5. *Provision of continuity.* Schools and their teachers, of course, are not the only instruments of society for the interpretation of the culture to the young. Because many other social institutions share

this function—the exact distribution of the responsibility depending on the social organization of the particular community—the teacher must to some extent coordinate her work with what goes on outside the school. Typically the teacher belongs to the community in which the school is located and has various roles as a member of society in addition to his or her role as a teacher, but part of the teacher role itself is the provision of the needed continuity between school and community. School events to which the general public and particularly the parents of pupils are invited are one means by which such continuity is developed. Special organizations such as the Parent-Teacher Association, for example, are another. Field trips by school groups to places of interest in the community are still another. The teacher's function in helping children to knit together their in-school and out-of-school perceptions of life is an important one. If the teacher has an assistant, this function, too, may be shared. If the assistant accompanies the teacher and class on a field trip, for instance, her activity cannot be sufficiently described merely by saying that she helps supervise the children and looks after their safety. In fact she joins in their experience and assists the teacher in the educational venture of exploring the meaning of this experience. The very nature of the activities in which a school and community cooperate invites teaching participation by the assistant to the extent of her understanding and ability.

6. *Preparatory and supportive tasks.* Not only are teachers expected to teach and care for their pupils during the six hours or so of the school day, but they must also accomplish certain other tasks outside of school hours if their work is to go smoothly. Under the general heading of "preparation" teachers often list such tasks as finding and securing needed teaching materials, preparing and duplicating work sheets, tests, and other typed or printed matter, correcting papers, planning new assignments, and many similar activities that contribute to and support the main tasks of teaching. Some of this work is essentially of the nature of research, whereas other parts of it are more of the nature of critical evaluation and may tie in rather closely with the evaluation activities carried on by pupils in the classroom. There is, however, a considerable amount of more or less clerical and mechanical work to be done, and ordinarily the

teacher is without any assistance for these chores. Some schools, to be sure, are able to assign some of the time of an office secretary to helping teachers with typing or mimeographing, but most typically there remains enough clerical work to constitute a substantial element in the teacher's job. Like the other tasks that a teacher may delegate to an assistant, the clerical or mechanical work is likely to be so related to primary functions and responsibilities of the teacher that the quality and timeliness of its accomplishment are of decided importance. A mere perfunctory approach to these supporting activities without regard to their contribution to the teaching-learning processes cannot prove satisfactory. This does not imply, however, that teachers would find it impossible to delegate any of them to an assistant, but only that if delegated they must still be accomplished in the proper fashion. Even in the performance of seemingly routine tasks the teacher's helper is actually a participant in the primary functions of the school.

### *Comparative Analysis of Roles of Fellow and Teacher Assistant*

The foregoing discussion of the general implications of the elementary-school teacher's role for the possible development of the assistant's role suggests ways in which the assistant *might* be used but certainly does not define how she *should* be used in a particular situation. The problem of determining what is prudent and advisable is quite different from that of perceiving what is possible. Our next undertaking, therefore, will be to show how, under the conditions of the present experiment, the Fellows actually *were* used as teachers' helpers, and to compare this use with that of the Teacher Assistants described in an earlier report.

At the beginning of the first year of experimentation (1955–56) all Fellows and Teacher Assistants were asked to keep logs of their daily activities. From these simple lists of tasks, which the teachers had found it possible to delegate in the early stages of their experience with helpers, the staff of the Study then developed a reporting form to be used in keeping further activity records. (A copy of this form will be found in Appendix B.)

In the report on Teacher Assistants extensive treatment was given to the question of how a teacher's work can be so scheduled that the pupils' learning activities, the professional tasks of the teacher, and the work delegated to the helper may combine to achieve desired results. Simultaneous records kept by the teacher and Teacher Assistant were analyzed to show, period by period, how the division of labor was worked out in several separate cases. Although the services of the Fellows were not used in exactly the same way as were those of the Teacher Assistants, the nature of the daily program and the general manner of using the helper revealed by the activity records are quite similar for both groups, and the reader who is interested in the detailed case studies is referred to that report.[3]

The best available material upon which a comparison between the functions of the Fellows and Teacher Assistants may be based is the set of daily activity reports prepared on certain days within a four-week period in May and June, 1956. At that time five Assistants and four Fellows were working in Fairfield schools. Although the groups were small they afford an interesting comparison, the first being the entire number of Assistants employed in Fairfield at the time and the second being the entire number of Fellows in "Group B" and quite representative of the Fellow group as a whole. Because the records reflect the situation as it stood at the end of the first year of experimentation, the teachers involved had had enough time to get used to having helpers and to decide how they might best be used—the new roles had begun to develop and take definite form.

In setting up categories in which to classify the activities reported the staff of the Study made a basic distinction between those activities that involved direct interaction with pupils and those that did not. These categories were further subdivided as shown below:

*Activities with Pupils*
- Group work
- Individual work
- Supervision in classroom
- Supervision outside of classroom
- Miscellaneous

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[3] Yale-Fairfield Study of Elementary Teaching, *Teacher Assistants*, pp. 35–51.

*Other Activities*

- Planning
- Preparation of materials
- Evaluation and reporting
- Housekeeping
- Miscellaneous

In the pages that follow, the specific activities of the Fellows, classified under these categories, are compared with those of the Teacher Assistants. No attempt was made to set down all the activities listed by the members of either group, but enough were included in each case to show something of the nature and variety of the work and to afford a general qualitative comparison.

*Comparison of Daily Activities Reported by Fellows with Those Reported by Teacher Assistants on Days of Record-Keeping in May–June, 1956*

| SPECIFIC ACTIVITIES REPORTED BY FELLOWS | SPECIFIC ACTIVITIES REPORTED BY ASSISTANTS |
|---|---|
| ACTIVITIES WITH PUPILS | |
| *Group Work* | |
| Take spelling lesson (read story, oral lesson, dictate test) | Read a story—late milk |
| Reading lesson with small group: pass out short quiz on assignment | Start a spelling drill with children. (Teacher continued) |
| Teach social studies lesson on India | Explain to all of the children how they should do the work |
| Help committee on their social studies report | Opening exercises with children |
| Discuss coming test with reading group | Pass out drawing paper for reading work |
| Give advice to girls drawing maps | Show the children how to fold their papers |
| Talk with children about map of Southport | Watch the children while Teacher speaks to the Assistant Principal |
| Read chapter of a mystery story | Slow group in spelling—have five students |
| Supervise spelling bee | Give vocabulary test |
| Teach two-part camp song to class | Bring up lines |
| "Grammar guesses"—similar to spelling bee, using rules for English | Read social studies to class |

SPECIFIC ACTIVITIES REPORTED BY FELLOWS

Opening exercises (prayer and pledge)
Work with reading group (vocabulary, oral reading, stenciled test on looking up quotations from story)
Dictate sentences containing all new spelling words
Give timed test in arithmetic and collect papers as pupils finish
Explain English work on the board to be done in the afternoon
Sing alto with children
Conduct oral reading and discussion period with small group
General assistance in kindergarten during work time
Listen as children explain hobbies
Look at homing pigeons brought in by second-grade child

SPECIFIC ACTIVITIES REPORTED BY ASSISTANTS

### *Individual Work*

Help child with crossword puzzle
Help a girl make out line-up of girls' softball team
Advise some pupils on social studies reports
Talk to child about homework
Set up opaque projector with two pupils
Help slow pupil with arithmetic homework for night before
Help boys with scrapbooks for wildflower display
Help students with science projects
Explain arithmetic process to one of the students
Observe children finishing correcting arithmetic papers and help

Show two children what to do on their circus drawings
Show pupil how to make his top row of arithmetic numbers
Two pupils didn't want to go out to recess; talked with them and explained why they should go out
Work with pupil on his workbook
Tie pupil's shoes and give him permission to go to the lavatory
Bring pupil to the nurse and stay with her
Explain to student why 6 + 4 makes 10 and 7 + 3 makes 10, too
Pupil asked if she could paint;

SPECIFIC ACTIVITIES REPORTED BY FELLOWS

individuals find errors

Work with one pupil on division of whole numbers by fractions

Start one child sewing

Help pupils spell words for project on television viewing

Give spelling test to one boy; correct, record, and return

SPECIFIC ACTIVITIES REPORTED BY ASSISTANTS

opened and mixed the paints for her

Help pupil with reading work on board

Help one of the students with a cover for the class booklet

### *Supervision in Classroom*

Call pupils to get coats

Line up children to go home

Line up children for hot lunch

Have charge of class

Check desks for dismissal

Supervise behavior of pupils remaining in room during library period

Supervise the helpers that come in each morning

Have the children rest for five minutes while teacher goes out for coffee

Supervise two children staying after school

Line up children while I sharpen their pencils

Supervise the rest period

Watch the children while teacher leaves the room

Line up children for the assembly

Take over half of kindergarten class while the teacher gives test to the other half of the class

### *Supervision outside of Classroom*

Go out to recess with class

Duty in cafeteria

Fire drill

Supervise noon recess

Supervise boys' lavatory and drinks

Take bus pupils out to bus

Umpire baseball and punchball games

Take hot lunch people to cafeteria

Help child who has broken his leg brace

Watch the children on the playground

Go outside with children to fire drill

Help to supervise the children during the assembly

Take teacher's class to recess so she can go on her coffee break (we played "Seven Up" inside, since it was rainy)

Take children to lavatory, then

SPECIFIC ACTIVITIES REPORTED BY FELLOWS

- Monitor during assembly
- Supervise garden watering—play catch with ball

SPECIFIC ACTIVITIES REPORTED BY ASSISTANTS

- down to cafeteria
- Go out for recess (but they had gym so I helped some children with their dancing)
- Recess—organize a game of kickball

### *Miscellaneous* (*with Pupils*)

- Tell pupil to come in and take down chairs
- Take attendance
- Help boy get glasses from lining of coat
- Inventory work, with two pupils helping
- Collect hot-lunch money
- Observe arithmetic lesson (finding area with different denominations)
- Observe while pupils write sentences on the board for English lesson
- Entertained by class talent
- Run film on Brazil
- Watch rhythmic activity
- Field trip
- Check list for who is to be given milk
- Take three boys to get library books from car

- Pass out milk to children
- Bring three pupils to library
- Line up children at my desk while stamp money is collected
- Pass out rexograph papers to each child
- Collect savings-stamp money
- Watch part of a movie on India
- Sign class pictures for three sixth grades
- Take attendance
- Clean out little tank and put child's polliwog into it
- Give out paste during art lesson

## OTHER ACTIVITIES

### *Planning*

- Talk with teacher about lesson plans for this week
- Look over work to be done in room
- Copy social studies assignment for next week in plan book

- Conference with teacher
- Ask teacher about using bulletin board
- Discuss morning duties
- Look in plan book to see how far

SPECIFIC ACTIVITIES REPORTED BY FELLOWS

Talk to secretary about opaque projector
Talk with principal
Discuss Southport project with teacher
Discuss text requisition for next year
Talk with teacher about pupils, marks, meetings, map of Southport
Go over day's plans with teacher
Discuss lesson plans in spelling and reading with teacher
Talk with third-grade teacher about art project for fifth-graders

SPECIFIC ACTIVITIES REPORTED BY ASSISTANTS

to go with reading mimeograph sheets
Check with office to see if I have any duties, playground, etc. for this week
Check work for today with teacher
Get work from another teacher
Discuss register with teacher

### *Preparation of Materials*

Go through library books looking for material on India
Make out chart of newspaper staff
Mark map for opaque projector, set up and focus machine
Draw map of stage on board for use in reading group
Rexograph arithmetic homework
Mount wildflower pictures for display in auditorium
Hunt and collect wild flowers in woods
Run off copies of arithmetic test for a teacher
Make order sheet for audio-visual materials to be used in social studies
Prepare sewing material for children

Put arithmetic work on the board
Look for an empty paste jar for teacher
Decorate bulletin board in the hall
Mix paints
Run off rexograph material
Put a story on the board
Cut oak tag paper into small cards
Print subtraction cards
Make up a story to put on the board
Make reading masters
Copy teacher's story about a scarlet tanager on chart paper
Make drawings of birds for masters
Make out helper cards and hang them up
Set up the movie projector
Start to make picture masters for seat work
Look for some papers for teacher
Finish the chart that I copied from the board

SPECIFIC ACTIVITIES REPORTED BY FELLOWS

SPECIFIC ACTIVITIES REPORTED BY ASSISTANTS

- Assemble rexograph seat-work for visitor
- Hang up pictures and chart

### *Evaluation and Reporting*

SPECIFIC ACTIVITIES REPORTED BY FELLOWS

- Record achievement marks
- List book reports children gave orally to class
- Correct and grade spelling papers
- Record health marks
- Check crossword puzzle
- Check reading quiz
- Sort homework—spelling and arithmetic
- Correct dictation papers
- Record grades in roll book
- Correct extra spelling papers and record grades
- Make sheet of comments about pupils
- Check on list of knowledge of nursery rhymes, and form lists of pupils who do not know certain rhymes

SPECIFIC ACTIVITIES REPORTED BY ASSISTANTS

- Make out a list of the children who have finished their work
- Make out special forms from the tests that I recorded on the cumulative record cards
- Correct arithmetic papers
- Work on office record cards with teacher
- Correct spelling papers (test)
- Work on permanent cumulative record cards; record test marks on back; put in alphabetical order, white and buff
- Correct achievement tests for several schools
- Record marks from scrapbooks
- Put arithmetic and spelling marks on charts
- Record book reports in folder

### *Housekeeping*

SPECIFIC ACTIVITIES REPORTED BY FELLOWS

- Put lights on
- Open venetian blinds
- Adjust shades and lock windows
- Erase blackboards
- Clean desk and drawer
- Straighten up desk
- Put away lunch

SPECIFIC ACTIVITIES REPORTED BY ASSISTANTS

- Take chairs down in the library corner and close cloakroom doors
- Clear off my desk
- Erase the boards
- Water the plants
- Dust the room, shut off the lights, close the windows, and clear off my desk
- Wash boards
- Put flowers in water
- Get the room ready for movie—close the curtains, pull screen

SPECIFIC ACTIVITIES REPORTED BY FELLOWS

SPECIFIC ACTIVITIES REPORTED BY ASSISTANTS

down, arrange the library chairs for class
Clean out cupboard and top of desk
Bring phonograph to other teacher
Help clean teachers' workroom

*Miscellaneous*

Go to office for attendance book
Count books for inventory
Take ball outside for physical education teacher
Check books for rebinding or discard
Take picture to office
List books that are missing
Balance lunch-money account
Bring register up to date
Go to office with request sheet
Fill out attendance book and work with figures for register
Work on register balancing

Stop for mail in office
Look for a library book
Bring attendance book to office
Make the milk list chart and hang up new chart
Work on the library books—list the name and author of each book
Add up and recheck the milk money
Try to locate the music teacher upstairs. Go to the office to find a book and to find out when the music teacher will be free
Work on attendance sheets
Go to office for book covers
Help in the office—six first-aid cases
Work on book inventory. Make index cards for all books
Pass out notices to all of the rooms
Check and count the covers for the booklet
Collect milk money for all the rooms and bring to the office
Ink in past months of register

### *Distribution of Working Time by Fellows and Teacher Assistants*

In their daily activity records the Fellows and Teacher Assistants showed the amount of time devoted to each item set down. From these notations it is possible to make a quantitative as well as a qualitative comparison of the activities of the two groups. The amounts of time devoted by each person to the activities in each category during the entire period of record-keeping were totaled and expressed in terms of percentage distributions, as shown in Table 3. Then the percentages of total time in each category were averaged for the members of each group, yielding the following group comparisons:

| CATEGORY | AVERAGE PERCENTAGE OF TOTAL TIME | |
|---|---|---|
| | *Fellows* | *Assistants* |
| Total | 100 | 100 |
| With pupils | (51) | (33) |
| Group work | 24 | 4 |
| Individual work | 7 | 9 |
| Supervision in room | 1 | 7 |
| Supervision outside | 8 | 8 |
| Miscellaneous | 11 | 5 |
| Other activities | (49) | (67) |
| Planning | 6 | 2 |
| Preparation of materials | 13 | 23 |
| Evaluation and reporting | 20 | 20 |
| Housekeeping | 1 | 6 |
| Miscellaneous | 9 | 16 |

Although the differences in the use of time by the two groups are not statistically significant (they could hardly be expected to meet the statistical test of significance in view of the smallness of the groups and the permissiveness of the situations in which helpers were used), they are significant in the practical sense. With respect to the specific groups in question the differences are certainly real and important, and it seems likely that similar differences would have been obtained had all eight instead of only four of the Fellows been included in the Fellow group. The comparisons show that approximately equal use was made of the services of the Fellows and the Teacher Assistants in giving individual attention to pupils, in supervising pupils outside the classroom, and in activities having to do with evaluation and reporting. Much more of the Fellows' time than of the Assistants' was devoted to group instructional activities, but more of the Assistants' time was devoted to supervision in the classroom.

The meaning of these two comparisons is made clear by the descriptive entries previously listed under those categories. Ap-

### Table 3

*Percentage Distribution of Time Devoted to Various Activities by Fellows and Teacher Assistants on Days of Record-Keeping*

| | FELLOWS | | | | ASSISTANTS | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | *Block* | *Buchwalder* | *Schaalman* | *Wilson* | *Enemon* | *Marsilio* | *Mullett* | *George* | *Morrissey* |
| *Total* | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| *Activities with pupils* | (52.7) | (62.6) | (29.9) | (58.0) | (34.3) | (43.2) | (15.4) | (33.0) | (37.9) |
| Group work | 34.1 | 28.0 | 7.4 | 24.9 | 4.0 | — | 5.4 | 3.0 | 8.0 |
| Individual work | 7.3 | 7.6 | 5.5 | 8.0 | 8.9 | 8.1 | — | 13.7 | 12.8 |
| Supervision in classroom | — | 3.6 | 1.1 | — | 6.9 | 20.5 | 1.9 | — | 2.7 |
| Supervision outside classroom | 5.0 | 13.6 | 7.7 | 6.1 | 6.3 | 10.9 | 5.4 | 9.7 | 9.2 |
| Miscellaneous | 6.3 | 9.8 | 8.2 | 19.0 | 8.2 | 3.7 | 2.7 | 6.6 | 5.2 |
| *Other activities* | (47.3) | (37.4) | (70.1) | (42.0) | (65.7) | (56.8) | (84.6) | (67.0) | (62.1) |
| Planning | 1.4 | 6.4 | 9.8 | 5.7 | 1.7 | — | 2.2 | 2.4 | 4.4 |
| Preparation of materials | 6.0 | 14.7 | 23.7 | 6.7 | 34.1 | 23.6 | 11.6 | 24.3 | 16.9 |
| Evaluation and reporting | 32.8 | 13.0 | 18.3 | 15.3 | 8.4 | 13.5 | 38.1 | 16.4 | 25.3 |
| Housekeeping | .2 | 1.2 | 1.1 | 3.1 | 6.1 | 2.6 | 4.6 | 13.6 | .4 |
| Miscellaneous | 6.9 | 2.1 | 17.2 | 11.2 | 12.4 | 17.1 | 28.1 | 10.3 | 15.1 |

parently the Fellows frequently undertook direct responsibility for specific lessons, which they planned carefully and carried out under the teacher's general supervision. Only rarely did they report being in general charge of pupils in the classroom without indication of some specific instructional activity in progress. The Assistants, on the other hand, less frequently reported specific forms of group work, but often had general charge of a classroom for brief periods in which they apparently were not responsible for any direct instruction. The greater use of the Fellows in instruction as such is indicated, too, by the greater amount of time they devoted to planning, which generally represented planning conferences with the teacher. The Fellows also devoted more time than did the Assistants to miscellaneous activities with pupils, especially those having to do with observation of lessons and giving audience to pupil performances. It is probably quite significant, therefore, that approximately half of the Fellows' time was used in ways that involved direct interaction with pupils, whereas only one-third of the Assistants' time was so used. In this respect the Fellow role is appreciably the more teacher-like of the two, a result that confirms the hypothesis concerning role development mentioned earlier in this chapter.

The categories of work to which the Assistants devoted more time than did the Fellows were, in addition to supervision within the classroom noted above: preparation (i.e. of materials for use in instruction), housekeeping, and miscellaneous other activities. These clearly define the role of the Assistant as mainly one of supporting activity together with a smaller amount of direct participation in the instructional process. The Assistant is sometimes involved in teacher-like activities but more often in the clerk-like activities that teachers so commonly have to perform when they lack the services of helpers. The contrast between the roles of the Fellows and the Assistants, however, is not sharp but is mainly found in the relative emphasis on the various types of function.

*General significance.* The fact that the Assistants, selected according to the standards previously described, were actually able to participate in the instructional process to some extent is, perhaps, the most arresting finding of all. That both the Fellows and the Assistants developed useful roles in the schools where they were assigned without a single exception is also highly significant. It apparently means that the role of the elementary-school teacher is subject to modification by the delegation of certain supporting tasks to appropriately selected helpers. What the consequences of such a reorientation of roles may be has already been set forth in part in a previous report, and will be described further, with particular reference to the use of the Fellows, in the next two sections of this chapter.

## B. EFFECT ON TEACHERS

Among the purposes to be served by the Fellow Program was that of enabling experienced and capable teachers to concentrate more fully on their professional tasks and thus to meet greater teaching responsibilities. At various points in this report reference has been made to this objective and its effect upon the planning and execution of the experiment. In the present chapter we shall try to assess the effects of the Fellow Program on cooperating teachers, insofar as this is possible with the data obtained.

### *Previous Studies*

At least two previous attempts have been made to determine what changes occur in a teacher's job when the opportunity to delegate certain tasks to an assistant is provided. The first, undertaken by Central Michigan College of Education and the Bay City (Michigan) and other public schools, resulted in findings that were summarized in these words:

> During the year, four time studies were done concurrently for both the Cooperating Teachers and the Teacher Aides. A record was compiled of the time spent by the teacher and by the Aide as each carried out his various activities in the regular school day. The list of twenty-two defined activities, as described in this Report, was used.
>
> Some significant facts become evident as the concurrent time study data are examined. These facts give the first objective evidence as to exactly what changes may occur when a teacher is given a trained, carefully selected Teacher Aide to help her with her many duties and related responsibilities.
>
> The time study data indicate that:

> 1. The teacher was able to spend on an average 23% (fifty-six minutes) more time on activities closely related to instruction, namely Lesson Plans, Assignments, Recitation, Desk to Desk, Counseling, Dictation, Supervision.
>
> 2. The Teacher averaged 48% (forty-one minutes) less time on those activities not closely related to instruction, namely, Correcting Papers, Taking Roll, Opening Exercises, Housekeeping, Writing On Board, Making Out Reports, Transition Time and Monitoring Written Lessons. The Aides spent over three times as much time as the teacher in carrying on these activities.[4]

The categories used for the classification of teachers' activities are clearly defined in the report of the Michigan study, but unfortunately not enough information is given about the context in which each function is exercised to allow the reader an independent judgment as to which are "closely related to instruction" and which are not. Apparently, however, teachers having assistants were able to delegate many subordinate tasks and devote more time to the crucial teaching functions.

The second attempt to appraise the effect of the use of teacher assistants on the teachers' own functions was that reported earlier by the Yale-Fairfield Study of Elementary Teaching. A summary statement of the findings is given below:

> Substantial amounts of time were saved by teachers in clerical work, routine classroom activities, and certain easy instructional tasks. Minor amounts of time were saved in housekeeping, and supervision outside the classroom. Some additional time was required in planning. Because of the time saved and because of greater protection from interruptions, teachers were able to give more individual attention to pupils, use more specially prepared material, carry the instruction further in some subject areas, provide better for individual differences by better grouping, and spend more time on curriculum enrichment.[5]

Teachers' opinions about the use of assistants are given elsewhere in the report just cited, but no direct quantitative information about the effects of the use of assistants is provided.

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[4] A Cooperative Study for the Better Utilization of Teacher Competencies, Second Printed Report 1955 (Mount Pleasant, Michigan: Central Michigan College, 1955), p. 17.

[5] Yale-Fairfield Study of Elementary Teaching, *Teacher Assistants* (New Haven, Connecticut: The Study, 1958), p. 133.

The shortcomings of the previous studies reflect no lack of serious effort but rather the difficulties involved in making an adequate appraisal of the effect of any given change in conditions on the professional functions of teachers. The teacher's role is not simple but complex. The tasks she performs do not readily fall into "instructional" and "non-instructional" categories, though it is fairly obvious that some are easy and others difficult to perform. As compared with factory work, for which certain techniques of job analysis have been developed, the tasks of teaching are non-repetitive and of irregular, almost unpredictable, occurrence. Therefore the base period with which observations under changed conditions might be compared is hard to establish. Clearly, no single day of teaching provides anywhere near a large enough sample of a teacher's job activities to characterize his or her job as a whole, but more extensive samples are costly and hard to obtain. And finally, there is the problem of individual differences among teachers in the manner in which they practice their profession, and hence in the way they distribute their time among categories of activity, once these are defined. The differences are not so minor that they may be ignored in favor of an average, but are frequently so large and important that an average has little value.

### *Methods*

In order to measure a change in the distribution of teacher time among work activities—the change resulting from the delegation of certain duties to assistants—it would be necessary first to obtain an adequate sample of each teacher's activities without an assistant and then to obtain a similar sample for the same teachers working with assistants, all other circumstances being held as nearly constant as possible. Because different teachers distribute their time quite differently to begin with, according to their different styles of teaching, the patterns of change might be expected to differ also. For this reason a fairly large sample of teacher-and-assistant teams would be needed to yield results that might reasonably be regarded as typical consequences of the availability of the assistants' services. Neither in the previous studies nor in the present one have these conditions been fully satisfied.

Before-and-after measurements of time distribution for the same teachers, with conditions other than the assignment of the Fellows held constant, were not feasible in the experiment here reported. An effort was made, however, to observe and report the use of time in the experimental situation itself by the teachers to whom Fellows were assigned. This, it was thought, would be of some interest *per se*.

A general approach to the analysis of the teacher's role has already been set forth in a previous section as necessary background to the description of the role of the teaching Fellow. The same plan, somewhat modified, will be used here; it does not attempt fine discriminations of teacher behavior but sets up rather broad categories based on teacher-reported descriptions of classroom situations and other work outside the classroom. The original descriptions included information as to time of occurrence and duration, the curricular reference or relevance of the activity described, and the actions of the teacher and of the pupils (if pupils were involved) in relation to the general activity.[6] Each "bit of teaching" or other activity is thus reported in a context of time, relevance to the general school program, and pupil activity, if any. The categories for classification were defined mainly on the basis of the teacher's principal function in this unit-situation. Two general types of situation are distinguished: those that do and those that do not involve direct interaction with pupils. Although the use of such a method requires the exercise of judgment on the part of the person applying the system of classification, and such judgments are fallible, a satisfactory degree of reliability can be expected with reasonable refinement of the method. In the present instance, however, reliability has not as yet been ascertained.

### *Qualitative Description*

The list of categories used for the description of the Fellow's job was slightly expanded in order to account for all the teaching functions that were reported. "Group work" was divided into two parts,

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[6] Copies of the reporting form and instruction sheet that accompanied it may be found in the Yale–Fairfield Study of Elementary Teaching, *Report: 1954–1955*, Appendix C.

"whole class teaching," and "group teaching," which are largely self-explanatory but which will be further clarified by examples. "Observing" is an additional category that was found necessary. In the following pages each heading in the scheme of classification is followed by several examples to illustrate the nature of the unit-situations typically included. In each example the curricular or time reference is indicated in parentheses and the teacher actions and pupil actions, if any, are described in nearly the same words as in the original protocols.

### *Classification and Description of Activities of Teachers to Whom Fellows Were Assigned*

#### ACTIVITIES WITH PUPILS

#### *Whole class teaching*

(Arithmetic) Teacher shows filmstrip on measures to introduce subject; leads discussion of practical application of measures in everyday life; gives directions for illustrating use of tables. Children read and answer questions on filmstrip; give examples of uses of measures; illustrate use of tables.

(Language) Teacher leads discussion and stimulates activities. Children discuss interpretation of words, particularly highly colored adjectives that "fool you" as used in TV ads, newspapers, and magazines; resort to dictionary for meanings of some of these words.

(Conduct) Teacher leads discussion of playground behavior. Children work out a plan for avoiding playground "hogging."

(Social studies) Children debate question, "Resolved: The United States Should Help Brazil." Teacher jots down good arguments and notes omissions.

(Penmanship) Teacher comments on yesterday's papers; stresses spacing of letters and words, endings, and correct writing posture; checks individual pupils. Children demonstrate at chalkboard, comment on papers displayed, do written assignment.

(Music) Teacher plays records for listening; observes children's reactions to "quiet time." Children listen. Teacher explains parts of square dance that seemed hard; organizes dancing, which Fellow directly supervises; watches reactions of people not dancing as well as ones dancing.

*Group teaching*

(English) Teacher directs children to groups in preparation for activity. Pupil groups meet to go over dramatizations of correct form of telephone conversation. Teacher works with groups, introducing topics and giving directions.

(Work period—kindergarten) Teacher helps "thruway committee" with hill—how to make things stand up. Children in this group work out individual problems for home and thruway unit; connect telephone in house. Other children cut out pictures to be used in games; tape paper to cover ground; draw, cut out things for thruway. Teacher leads discussion on why you can't quit if things are hard to do; groups people who need group feeling in work.

(Reading) Teacher works with one group while Fellow works with another; locates setting for story of the Congo on map; asks questions on vocabulary: jungle, climate, baobab tree, African names. Pupils relate experience from TV and stories of jungle, wild animals, mud houses, etc.; read subtitles aloud; read silently in preparation for questions; answer questions.

(Arithmetic) Teacher helps advanced group (five pupils) interpret graphs they had found in news magazines and supplementary texts. Advanced group decides to make a survey of children's preference in TV programs. With remainder of class teacher develops long division with zero in tens place. Children work at board and at seats on the new step.

(Music) Teacher practices song with quartet before school.

*Individual teaching*

(Science) Teacher spends time checking with children the material they found on nature study. Children draw diagram.

(Reading Activities) Teacher helps with new vocabulary; listens to reports; guides the evaluation of reports. Children read in the library; share book or story with rest of class.

(Planning time) Teacher o.k.'s reports on West Point to be copied over. Children work on reports. Teacher makes general comments on thank-you notes to Mr. ..........., as some letters are more personal than others, etc. Children copy letters; turn them in when finished.

(Poetry—kindergarten) Teacher checks individual knowledge of Bo-Peep. Children say rhyme, see if others know it, etc.

(Spelling, arithmetic) Teacher answers questions about spelling and arithmetic homework, giving special emphasis for those who need checking. Children copy homework from board, ask questions.

(Library reading) Teacher helps in selection of books; discusses individual needs and group needs; book reports, broadcasting program. Children read parts of books to teacher for testing reading ability and for choice of books; share "treasures" they found in books with others, such as pictures, ask teacher and librarians for help when necessary, such as more books on drawing, horses, more Robin Hood stories, etc.

*Supervision inside classroom*

(Lunch—kindergarten) Teacher supervises people who are still putting away blocks. Children finish cleaning up, together with much "important" conversation; finish writing stories and pictures.

(Recess—lavatory) Teacher supervises as children file to lavatory; have free period inside because of rain; play paper and pencil games.

(General business) Teacher sends children to give out stamps collected and picture money; goes over a notice from office concerning reading books; counts books; checks notices; checks plans to see how to alter because of assembly at 10:30. Children bring up money for pictures, lunch, milk, etc. Give out stamps (room duty). Count books for office report; finish up letters for bulletin board; take attendance and lunch money to office; work on social studies assignment and English project.

(Social studies) Teacher administers and monitors tests. Children take the test for unit on the United States possessions.

(Social studies) Teacher shows movie on the Amazon. Children watch film.

*Supervision outside classroom*

(Recess) Teacher goes out on playground. Children play ball.

(Assembly) Entire school contributes to a "going away" program for the principal.

(Noon period) Teacher takes cafeteria duty. Children have hot lunch.

(Assembly) Children in all-purpose room for program by glee club. Teacher supervises group.

(After school) Teacher has bus duty. Children line up to board busses.

(Noon period) Teacher checks on children in building who should be outside.

(Noon period) Teacher organizes 3rd grade punchball game, supervises 4th, 5th, and 6th grade boys' baseball, talks to captains of teams, records scores.

(To and from town library) Teacher keeps children on sidewalk, talks to individuals about books chosen and what they think will be chosen as 4th grade choice for "book of the month." Pupils walk and talk, notice dogwood trees and flowers along the way; some read and look at pictures as they walk.

*Miscellaneous (with pupils)*

(Physical education) Teacher gets children arranged in teams ready to go out with Physical Education teacher.

(Planning) Teacher sends reporters to other classrooms for news for newspaper; takes attendance; confers with child on irregular attendance. Children prepare speech for rooms; check and work on homework.

(Work period) Surprise fire drill; teacher accompanies children outside.

(Opening exercises) Teacher takes attendance; collects money for cook-out and trip to Audubon Center. Children give accounts of their weekend activities which led to birds they had seen, etc.

(Before school) Teacher changes children's desks and chairs to new arrangement.

### OTHER ACTIVITIES

*Planning*

(Before school) Check over plans for the day; get filmstrip machine; talk with Fellow about social studies plan and need for checking reference material.

(Before school) Talk with principal about summer school for one child.

(Before school) Check with Fellow on today's schedule; write suggestions in her notebook.

(Music) Meet with music supervisor to discuss, evaluate, and plan ways to improve music in room this year.

The month is May
Today is Wednesday
The weather is sunny and warm
Months
Days
Weather
Library
Calendar
John P
Roger
Joseph
Jim C.
Jim R.
Jack
Judy
Karen
David
John
Chris
Ray
Roger
George
Richard

Teacher and Fellow plan together for work in a combined second-and-third grade.

A Fellow teaches fifth-grade pupils fundamental library skills.

(Physical education) Teacher works on plan book for next week as children meet physical education instructors on play field.

(Spelling) Check picnic details from reports by committee chairmen while children work on spelling words.

(Before school) Discuss plans for morning's work with Fellow; discuss globe and map needs for class; talk with another teacher about her using Fellow while changing classrooms.

(Before school) Call P.T.A. president about getting used rackets for tennis group; discuss assembly date with principal.

*Preparation of materials*

(Social studies) Teacher checks film catalog for Social Studies film after school.

(Music) Teacher looks up music to be taught by music teacher during noon period.

(Music) During recess teacher checks record player to be sure it works right while children are on playground with ball.

(Before school) Teacher checks with office to arrange for a field trip.

(Before school) Teacher puts written work on the board.

(French) Teacher assembles prizes for picnic while children are working with special teacher.

(Social studies) Teacher looks up maps and materials for unit the Fellow will work on with small group, "Southport."

(Evening) Teacher checks in *Instructor* magazine for pictures of boats for mural; calls parent who will speak to class next week on Old Southport.

(Science) Before school, teacher calls high school about faculty meeting; prepares auditorium for wildflower exhibit; prepares materials, cardboard, paste, etc., for scrapbook covers.

(French) Teacher prepares papers and work for reading list while children have lesson with special teacher.

(Science) Teacher looks up ideas for making birdhouses for class project on birds.

*Evaluation and reporting*

(Spelling) While children have spelling lesson with Fellow, teacher checks and records art papers; checks thank-you notes for penmanship and general neatness.

(Noon period) Teacher checks arithmetic papers; marks thank-you notes to be copied over.

(Recess) Teacher looks over pictures and marks them while children are outdoors with Fellow.

(After school) Teacher corrects and records arithmetic papers and reading seatwork.

(After school) Teacher corrects science booklets.

(Recess) Teacher evaluates answers on questionnaire.

(Evening) Teacher corrects English, arithmetic, and writing papers, and makes comments for tomorrow's work.

*Housekeeping*

(Work period) Clean up after bookcase, fully loaded, tipped over.

(After school) Clean desk and collect work to take home.

(After school) Clean up boards, desk, homework.

*Observing*

(French) Observe as children work with special teacher answering questions in French.

(Before school) Listen as Fellow explains spelling lesson.

(Story) Listen to mystery story as Fellow reads.

(French) Teacher stays in room because she is interested in hearing the children read French.

(Story) While Fellow reads to group, teacher observes a reading lesson in Grade 1.

(Music) Watch Fellow lead a two-part song as children sing.

(Spelling) Listen in on Fellow's spelling lesson, commenting occasionally if asked. Children write twenty-five words as dictated.

(Social studies) Observe, comment, write suggestions for improvement. Fellow in charge of lesson. Children participate by panel discussion, reports; current events questions answered orally.

*Miscellaneous (other)*

(After school) Attend faculty meeting.

(Spelling) Work on register and supply list while Fellow conducts spelling lesson.

(Before school) Put attendance on report cards for May.

(Before school) Pick up attendance book and mail at office; chat with other teachers in hallway.

(After school) Address notices for advisory council meeting and put them in mail boxes at administration building.

(After school) Check book inventory with Fellow; discard books.

The reader will notice qualitative differences between what is described here and what is given in description of the Fellow's job earlier in this chapter, especially in the first three categories. The teaching functions not delegated, though classifiable in the same general categories, are clearly at a higher professional level than those delegated to the Fellows. The differentiation is not so clear, however, in the case of such supporting tasks as "supervision outside classroom" or "evaluation and reporting"; yet important qualitative differences may have existed which failed to appear because of insufficiently detailed reports.

### *Quantitative Description*

The quantitative data on distribution of the teachers' time are instructive mainly for the general picture they give of the work of the teachers with Fellows helping them. Direct comparisons between the teachers are of very limited value because of the differences in the particular teaching assignments. The reader is cautioned against hastily attributing ideas of "good" or "bad" to specific patterns of time use in the abstract. Much more information would be needed to support the formation of such judgments. The data do permit, however, certain observations as to the apparent effects of the availability of the Fellows' services, which will be noted below.

Table 4 gives the percentage distribution of time devoted to the various activities, previously described, by cooperating teachers on five days of record-keeping in May and June, 1956. The figures show that the functions involving direct interaction with pupils represented from three-fifths to three-fourths of the total working time of

Table 4

*Percentage Distribution of Time Devoted to Various Activities by Cooperating Teachers on Days of Record-Keeping*

| | | TEACHER | | | |
|---|---|---|---|---|---|
| *Activity* | *Average for All Teachers* | *Kane* | *Mulligan* | *Gibson* | *Murphy* |
| Total time | 100% | 100% | 100% | 100% | 100% |
| Activities with pupils | (70.9) | (74.5) | (71.2) | (60.3) | (77.6) |
| Whole class | 39.0 | 35.3 | 38.2 | 33.8 | 48.7 |
| Group | 10.1 | 10.4 | 7.7 | 8.6 | 13.8 |
| Individual | 5.0 | 9.9 | 7.3 | 1.4 | 1.2 |
| Supervision in classroom | 9.2 | 8.4 | 11.7 | 5.3 | 11.5 |
| Supervision outside classroom | 6.5 | 8.7 | 5.4 | 10.6 | 1.2 |
| Miscellaneous | 1.1 | 1.8 | .9 | .6 | 1.2 |
| Other activities | (29.1) | (25.5) | (28.8) | (39.7) | (22.4) |
| Planning | 8.6 | 9.4 | 4.6 | 13.9 | 6.3 |
| Preparation of materials | 8.7 | 6.5 | 5.7 | 12.0 | 10.9 |
| Evaluation and reporting | 4.8 | 2.2 | 5.7 | 9.6 | 1.7 |
| Housekeeping | 1.2 | — | 1.2 | 1.4 | 2.3 |
| Observation | 2.5 | 3.7 | 5.7 | .6 | — |
| Miscellaneous | 3.3 | 3.7 | 5.9 | 2.2 | 1.2 |

these teachers. A relatively large share of each teacher's time was devoted to the combined categories, "whole class teaching" and "group teaching," despite the fact that the Fellows were assigned considerable amounts of work in these areas also, as shown under the heading "group work" in Table 3, page 73. On the other hand, "miscellaneous activities, with pupils," "evaluation and reporting," and "miscellaneous activities, other" appear generally to have been delegated to such an extent as to constitute a much larger proportion of the Fellows' work than of that of the cooperating teachers.

### *Varying Patterns in Use of Fellows*

Miss Kane evidently depended on her Fellow, Miss Block, for evaluation and reporting more than most teachers, and she herself devoted less time to it than most. She also involved the Fellow extensively in group work, but assigned her less than the average amount of supervisory and miscellaneous work. She devoted somewhat more of her own time to individual work with pupils than did the other teachers and apparently retained most of the responsibility for supervision.

A very different pattern of activities was chosen by Miss Mulligan for delegation to her Fellow, Miss Buchwalder. Supervision outside of classroom accounted for a larger proportion of Miss Buchwalder's time than of any other Fellow's, whereas it represented a rather small proportion of Miss Mulligan's. Evidently, too, the Fellow was able to relieve Miss Mulligan of a substantial amount of work in the preparation of teaching materials, and Miss Mulligan applied some of the time thus freed to extra observation, for she devoted a greater proportion of her time than most teachers to activity in this category.

In the case of Miss Gibson and her Fellow, Miss Schaalman, the pattern was again different. A larger proportion of Miss Schaalman's time was devoted to preparation of teaching materials and miscellaneous other activities and a substantially smaller proportion to group work than in the case of the other Fellows, but it is not clear just how Miss Gibson's own work was affected by having a Fellow helping her. The distribution of Miss Gibson's time differed from that of other teachers for reasons that probably had less to do with her use of the Fellow's services than with other circumstances. Possibly, however, she was able, by reason of Miss Schaalman's assistance, to save time in miscellaneous activities with pupils and miscellaneous other activities. In spite of substantial assistance with preparation of teaching materials and evaluation and reporting Miss Gibson devoted a larger proportion of her time to these activities than most teachers, a fact that undoubtedly reflects her own individual style of teaching.

Miss Murphy's teaching assignment was substantially different from those of the other teachers and the distribution of her time reflects that fact in addition to the effects of her use of the Fellow, Miss Wilson. Her kindergarten class was held in the morning session only, and the Fellow was assigned to another teacher in the afternoon. Miss Murphy taught remedial reading in the afternoon; only the distribution of her morning time is shown. Although Miss

Wilson devoted a much greater proportion of her time to miscellaneous activities with pupils than did the other Fellows, Miss Murphy did not devote less of her time to such work than the other teachers, possibly because at the kindergarten level there is simply more of it to be done and less of certain other activities such as evaluation and reporting. Comparatively much individual work with pupils was delegated to the Fellow, leaving the teacher comparatively less; Miss Murphy devoted a relatively large amount of her time to working with the class as a whole.

From the foregoing discussion it is quite clear that marked variation in the distribution of time as between the categories of teaching activity is the outstanding characteristic to be found in the data. This is not at all strange, for it merely reflects the fact that teachers in elementary schools fill assignments that are often substantially different from each other and have considerable freedom in deciding how to allocate their time, especially outside of regular school hours. The diversity of patterns in the use of the Fellows' services is a natural consequence of these circumstances. It is difficult, therefore, to generalize the results in terms of effects on the jobs of the cooperating teachers, except to say that in various ways the availability of the Fellows' services appears to have freed teachers to give greater attention to other aspects of their professional work as circumstances permitted or demanded. Assuming that the free exercise of individual judgment is a characteristic of professional work, the decisions as to how best to make use of their Fellows provided the cooperating teachers new scope for professional development.

### *Effects as Seen by Teachers*

Perhaps the best source of information about the effects of the Fellow Program on the work of the cooperating teachers is the series of subjective reports by the teachers themselves. Such reports were made in several forms: some were given orally in conferences, others as brief written commentaries, still others as written reports answering specific questions. Most of the important points of information appear again and again in this mass of material.

In order not to burden the reader with an unnecessary amount of quoted material, we will present only the written answers to the questions on one report, the one that most fully explored the impact of the Fellow Program on the teachers' jobs. All answers to the selected questions, however, are included, so as to give an unbiased view of the information and opinions actually set forth by the teachers to whom Fellows had been assigned. The questions and the answers received are presented with only minor editing below:

1. *What additional activities can you carry on in teaching because of the delegation of certain tasks to your helper?*

More remedial work; more guidance; more time in teaching; experimental teaching, as spelling.

End of year—suppl. reading groups at times.

The learning situations have been widened because I can work more directly with the children and give them a chance to discuss situations under the guidance of a leader to whom I can give much help in planning group activities.

Can have five or six different groups working—which I couldn't do alone—wood work and finger paint together, for instance. Can go through lesson with no interruptions with Fellow as a "middle-man" —answer phone—talk to parents, messengers, etc.

More time to review and evaluate results of written papers, thus better determine needs and remediation. More time to work with the gifted child, stimulating and guiding this enrichment activity. Time to help the slow learner while the aide is monitoring written work.

More individual help for children—before school and at noon (arithmetic, reading, spelling). More skillful planning (more attention to many children)—variety of sources of information—more groups (soc. stud., English, reading)—as two can guide better than one (if plans carefully organized ahead). Kinds of activities where one needs to leave part of class—work with others on stage or in another room. Dramatizations, Christmas programs, special testing (personality 1-2 children).

More time for actual teaching in all areas. More extensive group work and large projects. I was able to establish more groups in reading and numbers than I could handle alone. I worked with the number committee (studying the second grade program) which I would have declined otherwise. Worked with kindergarten and other second grade class for half days.

More time was devoted to reading periods. We each were responsible for a group. These were alternated so that the helper had the experience of working with each group. More individual help could be given in arithmetic and spelling.

Give special help to the slow learners. Present more enrichment in science and social studies. Working with groups creatively. Planning and developing murals, encouraging originality, illustrating creatively and experimenting with different materials.

More group work to provide help for "poorer" students and also for the "gifted"! Was able to take over other classrooms. Was able to be co-chairman of Christmas assembly.

Movie for Connecticut-All-State reading conference. Definitely more individualized help, and more enrichment to all group projects.

More individual attention and time for "High Achievers" and "Low Achievers."

I was able to devote much more time to giving extra help to those who needed it. With a helper the teacher is able to observe each child very closely. With a helper you are able to have more than one activity going on in the room at once, with close supervision, which is very necessary in the first grade, especially at the beginning of the school year. I taught science to the two first grades, the fourth grade and the fifth grade while my student was teaching full time. I was in charge of directing the Christmas Assembly because of my student.

2. *What extra work for you is involved in planning, explaining, and supervising the work of your helper?*

Making out plans; discussing plans together; supervising special projects—as bulletin boards, records, group activities.

Very little.

A novice takes longer to carry out a task or assignment. I've had to step into situations which were not anticipated by student B and pull the class together. Much time has been spent in trying to explain that the good of the *children* is the first consideration in any undertaking. Discussions with student B have pointed up the fact that she enjoys actual teaching rather than just "assisting."

Have to plan more explicitly—look up background material for Fellow to read so that she will understand the "why" in addition to the "what" of teaching. Think through the things that might happen because of lack of experience of Fellow. Find myself doing more reading to back up more experimenting.

Jotting down suggested activities for the aide during the afternoon session. Going over the afternoon program with the aide. Explaining a teaching technique or device that will be carried out.

Clarifying—explaining—planning either in conference or in writing each morning—sometimes at noon—or at 3:30. Checking on lessons taught—establishing quality of work—that can be expected from particular group—need of helping in understanding problems of certain children. Ways of establishing rapport with group—maintaining friendly yet dignified attitude with children. Much explanation in checking papers—including interpretation of errors—how to use in re-teaching—necessity of emphasizing neatness—checking spelling, etc. However, I feel that additional help received from Fellow by far surpasses and outweighs the time consumed in planning with Fellow.

I spend more time than I usually do on my own lesson plans so that I can explain and discuss them with the student before I teach them. In all I think we spend a half-hour a day discussing plans, evaluating, etc. I find this time well spent as it is very beneficial for me to go over lessons step by step and to evaluate my own work. I do have to spend extra time setting up guides, etc. for the student to follow and make long-range plans so that all topics will be provided for during the time she is doing her independent teaching.

Lesson planning. Selection of materials. Evaluation and suggestions.

Conferences before and after school.

Time is the biggest factor—it takes extra time to plan activities together and time to explain or evaluate the day's program.

Because any conferences, etc. were held after school, I don't feel that the extra work was much at all.

Extra time was necessary to block out work in each area—to explain fully the objectives to be covered. Evaluation of the work of the class was necessary in order to help the Fellow evaluate (1) her teaching and (2) her evaluation of the children's work.

The extra work, for me, involved note-taking during the course of the day, when the helper was teaching. At the end of the day we would discuss the good and bad points of the day's lessons. Every day we had a conference to discuss our plans and to explain the why and how of things.

Time after and before school in talking over plans taught, next day's lessons, long-range planning, projects, discipline, etc. Observing the student quite often. Looking up reference material for the student to use. Explaining use of machines.

3. *What teaching activities, if any, are you unable to accomplish because of the experimental situation?*

None.

None.

One is hesitant about trying novel ideas because one fears showing situations that do not result in good teaching. My oral English program has been curtailed somewhat in that I felt the students would not understand my actions in getting children to appear before audiences with poise. In former years I was a bit of a clown or "ham actor" to relieve tensions in the youngsters.

Can't recall any.

None that I can think of.

There were many areas in which I didn't get to teach the things I ordinarily would have. This was particularly true when the student was doing full-time teaching and deciding on her own units of work, etc. In many cases she didn't include all the things I would have—or stressed something I might have spent very little time on. Many opportunities for incidental teaching were not used.

Prepare a better unit because of the time to do more reference work using the books in our own school.

None.

None.

I didn't find any activities that could not be accomplished.

None.

4. *From the point of view of your own satisfaction with your job as a classroom teacher how do you estimate the net effect of the experimental situation?*

Because of the personalities and capabilities of the two assistants that I have had, it has certainly proved a valuable all-around experiment.

Very good.

Feel the class was difficult to handle. Having assistants lessened the tension somewhat. But annoyance on the part of Student B upset the class routine at times. Student A helped me by her dependability.

It's a little hard to compare two situations which have so little in common—in the present one—triple session, it would have been impossible without the Fellows. I like the idea of another adult to share burdens as well as everyday occurrences—as the Fellows mature and accept more teaching responsibility, comparison will be easier.

Have not had an aide long enough to make valid conclusions.

Has been one of pleasantest years I've taught. Both girls most satisfactory. Children responsive—have taken much from situation—meeting many new people—becoming articulate in noting values gained from working with two teachers.

It gave me more time. Subjects were presented in a variety of ways. The pupils were very fond of the Fellow, although, as in every class, a certain few would try to take advantage of her.

Satisfactory.

There are no two people alike, or two people with the exact same standards in teaching. Even though the helper tried to have the children live up to my standards, she was unable to do so. In this way, I was unsatisfied with the experimental situation.

Excellent.

The children attempted to "play one against the other" for a while. Some children were visibly distracted by the dual-teacher set-up.

I enjoyed having a helper, especially one so capable as Miss ............ I never felt rushed or behind in my work. We were able to accomplish what we planned. This is due to the fact that the Fellows were familiar with the duties of a teacher, since it was their final training period. For example, I did not have to explain to my helper the clerical work involved, at the beginning of school. She knew what had to be done and did it. This was a great help.

I feel that the experimental situation was well worth the effort and time. I could readily see how these people will be better prepared for their first job than I was. My experience with the student was very satisfying.

There would seem to be little doubt that the availability of the Fellows enabled the cooperating teachers to extend their professional services to pupils in various ways. Not only did they teach somewhat larger classes on the average, but they also provided more fully for both group and individual instruction than they would normally be able to do and carried various additional school responsibilities as shown by their reports.

### *Further Comments on Method*

Greater precision in the reporting of the results of the experiment in relation to its effect on teacher's jobs could have been attained by restricting Fellow assignments to teachers whose jobs were much alike to begin with and by laying down fixed rules as to how the Fellows' services should be utilized. Neither of these restrictions was thought wise in the present experiment, as each would have narrowed the opportunities for using the Fellows to good advantage. In the opinion of the writers part of the success of the experiment as shown by favorable outcomes was a result of the flexibility permitted in many of its procedures.

It seems unlikely, at this point, that any clear and consistent pattern of job activities representing the "role of the elementary school teacher," generally conceived and susceptible to quantitative methods of analysis, will ever be found. A fictitious "average teacher" can always be created at will out of measurements of sample groups in various dimensions, but the likeness of the average to any considerable number of real teachers seems very problematic. Perhaps in future studies a classification of teaching situations into types before analysis of the teacher role into specific functions may yield better results. A better scientific description of what teaching really is and how it accomplishes its purposes would contribute greatly to the more accurate reporting of results in such undertakings as the present experiment.

## C. EFFECT ON PUPILS

### *Anticipated Effects*

In considering the impact of the Fellow Program upon pupils in the classes to which Fellows were assigned one might ask in what manner pupils might be expected to be affected. On the strength of the greater amount of individual attention available to pupils increased learning would perhaps be anticipated, but as previously shown the pupils received part of their instruction from the Fellows, who were undoubtedly less expert than the regular teachers, and their learning might be supposed to have suffered somewhat on that account. It should be noted also that the classes to which Fellows were assigned were usually somewhat above the average, for Fairfield, of twenty-six pupils. The teachers in charge, however, were fully alert to the need to prevent any serious impairment of the conditions of learning in their classes and were thought to have sufficient resources at their command and freedom in their use to be able to do so. On balance a reasonable expectation would appear to be that pupil learning would suffer no loss and might actually be enhanced because of the Fellow Program.

Not only the learning of formal subjects but also the learning of social behavior, group membership, and other informal matters needs to be considered. It would seem at least possible that the regular presence of a second adult in the classroom might be disturbing to the group and be an unfavorable influence on learning and behavior in these areas. There might be a tendency for the loyalties of the children to become divided between the teacher and the Fellow, or the pupils might attempt to play one against the other. The principal safeguards against these dangers were the care with which both the Fellows and cooperating teachers were selected and the fact that in each case the association was voluntary and was entered into with enthusiasm on both sides. Beyond this the vigilance of the teachers themselves, the school principals, and the Assistant Director of the Yale–Fairfield Study in charge of the Fellows' school assignments were arrayed on the side of good group relationships. The expectation, therefore, was that social learning and behavior would not be adversely affected by the Fellow Program, although the possibility that it might be was recognized.

### *Control Groups*

It was difficult to provide suitable control groups with which the groups to which the Fellows were assigned might be compared. In fact the groups ultimately selected cannot properly be considered as control groups at all in the sense in which the term is used in a rigorously conducted formal experiment. As nearly as possible, however, they were selected so as to yield fair and unbiased comparisons with the experimental groups: special care was exercised that they should be reasonably comparable with respect to all factors known to be likely to affect the measures of learning that were to be used. The procedures followed to assure comparability were the following: (1) each year after the selection of groups to which Fellows would be assigned all remaining groups in the school system at the same grade levels as the Fellow groups were considered as potential control groups; (2) since the primary factor in the selection of the Fellow groups was the competence of the teacher in the judgment of the Assistant Director of the Study in charge of assignments, the same criterion was applied in the selection of control groups—among the potential control groups all groups where the teachers were not judged to be approximately the peers of the previously selected experimental teachers were eliminated; (3) for each Fellow group the comparability of the school communities of the remaining potential control groups was then considered, and if any were found wherein there was a marked contrast in the nature of the community these were eliminated; (4) there remained in several instances two or more control groups that appeared comparable to experimental groups in terms of the criteria applied thus far, and a final selection among these was made on the basis of their median "total achievement" scores in the testing of the previous year. The resulting selection did not yield close comparability in terms of class size, but within the range of class sizes prevalent in Fairfield this factor has not been shown to have much effect on pupil achievement. The attempt to match groups in terms of class size would have interfered seriously with the application of the other, more relevant criteria.

From the above description it is obvious that there was no randomization in the assignment of "treatments," i.e. the experimental condition of assigning a Fellow to groups—under the circumstances such a procedure was not considered practicable. Therefore it would be impossible to ascertain whether any difference in the average performance of the two sets of groups that might appear resulted from the use of the Fellows or from other complicating conditions, perhaps unforeseen. The logic of the precautions taken to insure comparability, however, was to eliminate or reduce *foreseeable* causes of difference between the averages so far as possible. Under these circumstances a suitable comparison for the obtained difference, it is here maintained, would be the *hypothetical* standard error of sampling differences that would arise had samples of similar size been drawn at random from a single normally distributed population of groups. Thus the usual statistical test of the significance of the differences between two means can be applied with two reservations, one for each of the two cases that might arise: (1) if by the t-test the difference appears to be "non-significant," we should append the condition "unless, due to inadequate control, a difference in the opposite direction has canceled out an effect that would otherwise appear"; (2) if by the t-test the difference appears to be "significant," we should append the condition "unless, because of inadequate control, a combination of factors operating in the same direction has produced a difference of this magnitude." The precautions taken were such as to reduce the likelihood of either of these events, but they do not reach the usually prescribed standard of adequacy for such purpose. To the writers of this report, however, they appear to be decidedly better than no precautions whatever and to justify the use of a statistical test qualified as above indicated.

### *Measures of Achievement*

The regular testing program in the Fairfield schools provides for the giving of the Metropolitan Readiness Tests in kindergarten, the Metropolitan Achievement Tests in the primary grades, and the California Achievement Tests in grades four through six. These tests are administered in May of each year. In all grades except kindergarten the raw scores are transformed into grade equivalent scores by means of tables supplied by the test publishers.

In 1958 a newly revised (1957) edition of the California Achievement Test was used together with the new norms that accompanied it. The results were found to be considerably at variance with the results of previous testings, and therefore in 1959 the use of the earlier (1950) edition was resumed. In order that the average gains from one year to the next might be comparable, it was necessary for the purposes of the present report to make adjustments based on data supplied by the test publishers.

Of the various scores that may be obtained from the batteries used, "average reading," "average arithmetic," and "total achievement" are most uniformly available for all grades and years and most comparable when transformed into grade equivalent form. These, therefore, were the measures chosen for the comparisons between the experimental and control groups.

In addition to the regular testing program a supplementary testing in the fields of social studies and science was considered desirable for the purposes of the present study. The California Tests in Social and Related Sciences, a battery of six independent subtests, was administered to all Fellow and control groups in grades four to six in December and May of the first three years of the Fellow Program. It was found that the scores from Test 1, The American Heritage, Test 3, Geography, and Test 6, Elementary Science, best represented the curriculum content of these grades in Fairfield; the results from all six tests were tabulated, but only those from the three listed above will be reported here.

### *Test Results*

The most useful comparisons for showing the relative progress of the two sets of groups, those to which Fellows were assigned and those used for control, are the mean gains made by the pupils of each group on each measure of learning. Only a very crude comparison would result from taking merely the scores at the end of the experimental period as the measure of learning, inasmuch as these presumably include the effect of all learning in prior years as well as that of the period in question. The mean gains here to be reported were computed by obtaining the difference between the average initial and final scores achieved by all members of each group for whom both scores were available; in some cases this included all members of the class group and in no case did it fail to include a large majority. The use of gains for purposes of comparison, however, meant that results from the readiness testing in kindergarten and the results from testing in grade one, where no initial score in units comparable to those of the final score was available, could not be included with the rest of the data.[7] There remained seventeen groups in each category to be compared in terms of mean gains. The comparisons are given in Table 5. The use of the grade-equivalent score, in which the school year is the unit of measurement, means that the gain normally to be expected is exactly 1.0.

The wide range of mean gains exhibited in Table 5 may therefore be surprising to the reader. Evidently this variation is not caused to any great extent by differences between school years, or differences between grades—at least the data, upon inspection, give little or no indication of such relationships. A more likely explanation can be suggested on the basis of the writers' experience with other similar data collected during the course of the Yale–Fairfield Study, viz. that the variation is caused in large part by the varying degree of correspondence between what is taught in a particular subject area and the educational status or readiness of the group.

Individual pupils may make a poor showing of gain on tests if they either are poorly prepared to learn the material provided in the curriculum for a given period or have already learned much of it before the first testing date, thus having a restricted opportunity for additional learning. They may make much more than average gains, on the other hand, when the first testing occurs just at the time of readiness for rapid learning in a particular area, which the curriculum then provides for in the interval before the next testing. The same is true, to a lesser extent, of groups; although slow learning by some pupils tends to cancel rapid learning by others, groups that are generally in a state of readiness with respect to the subject matter to be offered in a given period but have not yet learned much of it by the first testing date show greater average gains than groups that are either too advanced or not yet ready for what the curriculum provides. From another viewpoint the curriculum itself may be regarded as the variable, and the differences in average gains among

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[7] In a separate comparison the two first-grade groups to which Fellows were assigned in 1958–59 were compared with the two most nearly equivalent groups that could be found in terms of average achievement at the year's end: there was practically no difference between them.

## Table 5

*Class Size, Initial Average Achievement, and Mean Gains in Reading, Arithmetic, and Average Achievement by Fellow and Control Groups*

| SCHOOL YEAR AND GRADE | CLASS SIZE |  | INITIAL AV. ACHIEVEMENT |  | MEAN GAIN IN AV. READING |  | MEAN GAIN IN AV. ARITHMETIC |  | MEAN GAIN IN AV. ACHIEVEMENT |  |
|---|---|---|---|---|---|---|---|---|---|---|
|  | *Fellow* | *Control* | *Fellow* | *Control* | *Fellow* | *Control* | *Fellow* | *Control* | *Fellow* | *Control* |
| *1955–56* |  |  |  |  |  |  |  |  |  |  |
| Gr. 6 | 30 | 30 | 6.55 | 6.50 | 1.01 | .85 | .82 | .75 | .89 | .84 |
| Gr. 5 | 30 | 24 | 6.02 | 5.55 | .12 | 1.70 | .68 | 1.29 | .50 | 1.32 |
| Gr. 4 | 24 | 19 | 4.27 | 4.23 | 1.32 | .88 | 1.40 | 1.01 | 1.25 | .94 |
| *1956–57* |  |  |  |  |  |  |  |  |  |  |
| Gr. 5 | 34 | 24 | 5.60 | 5.54 | .77 | 1.54 | .87 | 1.70 | .87 | 1.44 |
| Gr. 4 | 33 | 26 | 4.27 | 4.25 | 1.13 | .31 | 1.54 | .82 | 1.34 | .65 |
| Gr. 3 | 31 | 20 | 3.22 | 3.17 | .94 | 1.40 | 1.33 | 1.80 | 1.13 | 1.80 |
| Gr. 2 |  | 26 | 1.84 | 2.02 | 1.31 | 1.19 | 1.36 | .94 | 1.40 | 1.07 |
| *1957–58* |  |  |  |  |  |  |  |  |  |  |
| Gr. 5 | 34 | 35 | 5.57 | 5.62 | .98[a] | 1.04[a] | .67[a] | .94[a] | .69[a] | 1.02[a] |
| Gr. 5 | 24 | 20 | 5.65 | 5.55 | 1.33[a] | 1.34[a] | 1.15[a] | 1.03[a] | 1.30[a] | 1.29[a] |
| Gr. 4 | 31 | 20 | 4.77 | 4.80 | 1.14[a] | .65[a] | 1.84[a] | 1.30[a] | 1.61[a] | 1.12[a] |
| Gr. 2 | 30 | 25 | 2.52 | 2.44 | 1.74 | 2.04 | .88 | .98 | 1.36 | 1.63 |
| *1958–59* |  |  |  |  |  |  |  |  |  |  |
| Gr. 6 | 34 | 31 | 6.35[a] | 6.90[a] | .68[a] | .27[a] | 1.50[a] | 1.74[a] | .82[a] | 1.00[a] |
| Gr. 6 | 33 | 27 | 6.32[a] | 6.60[a] | .66[a] | .39[a] | 1.56[a] | 1.16[a] | .85[a] | .60[a] |
| Gr. 6 | 30 | 29 | 6.61[a] | 6.67[a] | .46[a] | .33[a] | 1.22[a] | .99[a] | .81[a] | .62[a] |
| Gr. 4 | 30 | 27 | 4.59 | 4.96 | .95 | 1.02 | 1.29 | 1.12 | 1.02 | .91 |
| Gr. 3 | 31 | 32 | 3.49 | 3.84 | .93 | 1.25 | 1.39 | 1.29 | 1.06 | 1.34 |
| Gr. 2 | 25 | 22 | 2.58 | 2.11 | 1.26 | 1.28 | .45 | 1.12 | 1.06 | 1.32 |

[a] Adjusted because of use of different norm in 1958.

groups may be attributed, in part, to the varying degree to which curricular content is adjusted to the status and needs of the pupils in each group.

Apart from the variation from group to group in actual learning in the areas tested, differences in the techniques of test administration and differences between the alternate forms of the tests themselves contribute to the variation of the obtained results. These are spurious factors in that they might lead to apparent differences where no real learning differences existed, but real in their contribution to the total variance of obtained average gains for groups.

When the two sets of groups are compared in terms of their averages, only the difference in class size is found to be statistically significant. The means and standard deviations for the measures that relate to the initial comparability of the groups were as follows:

| | CLASS SIZE | | INITIAL AV. ACHIEVEMENT[a] | |
|---|---|---|---|---|
| GROUPS | *Mean* | *S.D.* | *Mean* | *S.D.* |
| Fellow | 30.25 | 3.32 | 4.48 | 0.26 |
| Control | 25.71 | 4.67 | 4.51 | 0.28 |

[a] Adjusted for grade level.

The difference of 4.54 pupils per class, though statistically significant, is not of such magnitude that it can be shown to have practical importance in terms of its effect on pupil gains. The means and standard deviations for the measures of mean gains were as follows:

| | READING GAIN | | ARITHMETIC GAIN | | AV. ACHIEVEMENT GAIN | |
|---|---|---|---|---|---|---|
| GROUPS | *Mean* | *S.D.* | *Mean* | *S.D.* | *Mean* | *S.D.* |
| Fellow | .98 | .38 | 1.17 | .38 | 1.06 | .29 |
| Control | 1.03 | .52 | 1.17 | .31 | 1.11 | .34 |

These results, of course, must be interpreted in the light of what was said previously about the nature and extent of the control it was possible to establish. Gains or losses that would otherwise appear might have been canceled by opposite effects resulting from the difference in class size or other uncontrolled causes. No evidence either for or against such a hypothesis is available. The only conclusion justified by the data is that despite the larger size of the Fellow groups there was no reliable difference between the Fellow and control groups in their gains in reading, arithmetic, or average achievement.

Seven Fellow groups and seven control groups of those previously described can be compared on the basis of scores on the California Tests in Social and Related Sciences. The results are given in Table 6, where the comparative gains on the tests of the American heritage, geography, and elementary science are set forth. In these data the variation among groups is generally even more marked than in the data from the regularly given achievement tests (Table 5). Because of the shorter period between the testing dates the learning that may have occurred was presumably less well measured. Perhaps, also, the curricular validity of the social and related sciences tests was inferior to that of the regular achievement tests.

Although more often than not the control group gained more than the corresponding Fellow group on each of the three tests, none of the mean differences between the two sets of groups even approaches significance. The comparisons are given below:

| GROUPS | AMERICAN HERITAGE GAIN | | GEOGRAPHY GAIN | | ELEMENTARY SCIENCE GAIN | |
|---|---|---|---|---|---|---|
| | *Mean* | *S.D.* | *Mean* | *S.D.* | *Mean* | *S.D.* |
| Fellow | .71 | .66 | 1.03 | .36 | .70 | .88 |
| Control | .97 | .44 | 1.31 | 1.01 | .84 | .69 |

Here again the possibility that, because of inadequate control, class size, or unrecognized factors may have influenced the results unduly must be noted. Only the available evidence can be evaluated and it does not justify very positive conclusions. Apparently, however, good progress in general was being made by both the Fellow and the control groups in the subjects here reported, for the means shown above are all greater than the mean gain of 0.5 that would be expected in the five-month period from December to May. All but four of the fourteen groups exceeded that amount of gain on the test of the American heritage, all but two on the geography test, and all but four on the elementary science test (see Table 6). The use of Fellows in certain situations is not known to have influenced learning in these subjects in any way.

TABLE 6

*Mean Gains in History, Geography, and Science by Fellow and Control Groups*

| SCHOOL YEAR AND GRADE | MEAN GAIN IN AMERICAN HERITAGE | | MEAN GAIN IN GEOGRAPHY | | MEAN GAIN IN ELEMENTARY SCIENCE | |
|---|---|---|---|---|---|---|
| | *Fellow* | *Control* | *Fellow* | *Control* | *Fellow* | *Control* |
| *1955–56* | | | | | | |
| Grade 6 | .6 | .7 | 1.3 | 1.2 | 1.0 | .4 |
| Grade 5 | —.1 | 1.4 | 1.2 | 2.4 | .7 | .7 |
| Grade 4 | 1.7 | 1.4 | .8 | .7 | .9 | 1.3 |
| *1956–57* | | | | | | |
| Grade 5 | .7 | 1.4 | 1.6 | 2.9 | .9 | 1.8 |
| Grade 4 | .3 | .7 | .7 | .3 | .7 | —.3 |
| *1957–58* | | | | | | |
| Grade 5 | .3 | .3 | .6 | 1.4 | .2 | .7 |
| Grade 4 | 1.5 | .9 | 1.0 | .3 | .5 | 1.3 |

### *Evaluation by Teachers and School Principals*

Although test results are the most tangible evidence as to the effects of the Fellow Program on pupils, they are, by themselves, insufficient as a means of evaluation. Many important kinds of pupil progress are simply not included among the measures previously described, nor is it practicable or, in some cases, even possible to measure certain educational outcomes that nevertheless are important. More subjective forms of evaluation are, of course, open to serious criticism as to their reliability and validity, but in the absence of better instruments they may serve two useful purposes: to fill in some of the gaps left by objective testing, however tentatively, thus contributing somewhat to an over-all evaluation; and to reveal the serious and thoughtful concern that actually existed on the part of teachers, principals, and other professional staff members for the due accomplishment of the many educational objectives not represented in the formal testing program.

Because the teachers to whom the Fellows were assigned were in the best position to observe the effects of the program upon pupils, much reliance was placed on their considered judgments based on these observations. The teachers were asked to report, however, not only on this subject but also on other outcomes of the experiment, such as their own satisfaction, sense of accomplishment, and professional growth in teaching, and the benefits or lack of benefits to the Fellows themselves as teachers-in-preparation. Many opportunities were provided for discussion of these topics by teachers, principals, Fellows, and staff members. Some of the discussions were recorded on tape and later transcribed. On other occasions the cooperating teachers were asked to record their judgments on various matters in the form of written statements. Invariably the explanatory notes accompanying such requests called for frank criticism as well as support, disapproval as well as approval, of any aspect of the program under consideration.

Only part of the quantity of material thus obtained will be presented here. In selecting the statements to be included in this chapter the writers have attempted to give as full representation as possible to value judgments regarding the effect of the program on pupils, and have attempted to reduce or eliminate mere description, especially when it duplicates description given elsewhere. The following excerpts from the various reports of teachers are illustrative of the points of view most typically expressed:

> Having a teacher assistant in the room: (1) minimizes failure on the part of the child who can be helped before he reaches the block; (2) provides more help for individual children, good for the slow as well as the bright child; (3) means extra help to those who have been absent, so that they don't miss too much; (4) means another interested person to whom the small children can confide the many things they want to talk about.
>
> Children enjoyed the assistants. Some areas seem to have been more widely covered as far as subject matter is concerned. Children learned to confide in assistants and in this way solved the insecurity found sometimes in a large class situation.
>
> Remedial reading—(Because of variance in reading abilities of class pre-primer to fourth grade, it is necessary to have several reading groups and especially a great deal of remedial work, both in reading, spelling, and arithmetic).
>
> The assistant made it possible for these children to get extra remedial work in reading, spelling, and arithmetic.
>
> Helping answer individual questions, during written work. This is very important, in giving children more individual attention.
>
> While the teacher is working with a segment of the class, the Fellow is helpful in monitoring and getting the other children started in seatwork activities, thus permitting the teacher to devote her attention exclusively to group at hand. When the teacher is otherwise occupied, the Fellow helps individual children to find and organize research material in pursuit of their particular interest. What problems arise? Some children take advantage of another adult in the room and become too dependent on the Fellow instead of showing independence in work habits and initiative.
>
> I believe, in a situation like this, problems could arise unless the teacher and assistant work very closely together. To illustrate—a couple of times I told the children to do a certain thing and they said to me, "But the Fellow told us to do it this way."

Because of close planning, evaluation, and supervision, the children did not lose ground under the Fellow system. In fact, the Fellow's talents added to their general background.

Many more activities could be carried on with the aid of the Fellow, which enriched our learnings and stimulated the children's interests.

From the comments above it seems clear that while the teachers' opinions were generally favorable to the use of Fellows, at least as an experiment, they were not unaware of the potential problems and of the occasional adverse effects that might arise. When their remarks were critical, however, the intent appears to have been to sound a note of caution rather than flat opposition to the whole idea. Some of the additional points that teachers made concerning the effects of the Fellow Program on their pupils were as follows:

*Favorable*

Enables teacher to draw out shy pupils and get them to assume more responsibility.

Means more enriching activities such as newspaper, class meetings, sports programs, citizenship projects.

Checking of pupils' work can be done immediately, when it is most meaningful to children.

More active participation generally.

Less feeling of insecurity because of extra available adult help.

Fewer interruptions makes concentration by children easier.

Absentees can catch up faster.

Children get two points of view, not always agreeing, which is a good lesson earned early.

*Critical*

Smaller group would give teacher more time for reading groups, number work groups, etc., and individual help with slower children.

Children were more free of expression (occasionally too free) with Fellow, but sometimes healthy situation.

Biggest problem is teaching Fellows *not* to do anything for a child which he can do for himself.

Problem at beginning of year of teacher's knowing some children as well as she should—overcome later.

Fellow not resourceful enough in finding materials that would be applicable.

More opportunity for developing character, responsibility for one's self: chance to relate to two people, using each for different reasons rather than depending wholly on one.

Provided for smaller groups. Additional practice in word recognition techniques—flash card drills, phonetic games, etc.—has helped slow pupils to develop a variety of skills.

Allows more freedom for children.

It has, with most of the children, stimulated and encouraged initiative.

Materials prepared provided for various rates of learning so that the high achiever was challenged and the slow learner was not frustrated.

The general tenor of the opinions of the principals of the schools where the Fellows worked corresponds closely with that of the cooperating teachers' opinions. Not all the school principals' written comments can be presented here, for lack of space, but the following passages, representing the viewpoints of all the principals in whose schools Fellows were assigned in June, 1956, are typical. The principals had been asked to review the year's experience, considering both the advantages and the disadvantages of the experimental situation, and to report their judgment of its effect on pupils as individuals and in groups. The replies are given below:

The Fellows who have been assigned to our school have worked pleasantly and profitably with both individuals and groups of pupils under their care.

The two Fellow teachers at Oldfield School have aided many individual pupils. They have been helpful where the child has had reading, spelling, or arithmetic difficulties. They also have been very beneficial in helping the gifted children in research work for special projects. One of the Fellows has worked with the group presenting a play for the enjoyment of the fourth, fifth, and sixth grades here and also at Mill Plain School. They have taken over the teaching of spelling and other subjects with beneficial results.

General effect is good. My impression is that the five-year olds very early in the year realize that the Fellow is another person that they can turn to for help when the regular teacher is busy. The above statement holds true particularly for groups—especially where the activity is such that it demands many and varied manipulative skills, such as, cutting, pasting, arranging, etc. From my observation no dual authority exists which might cause confusion in the minds of the children; this speaks well for the teacher-pupil planning activity carried on by the teacher in charge.

The assignment of the Fellow in Pequot School had very good results both in the first and fourth grades. The original plan was to use the Fellow only in the fourth grade, but a change in plans was made to have her also help in the first grade after a teacher left in midyear. The two first-grade classes were then consolidated so that it made a large group in the first grade. Permission then was granted for the assignment of the Fellow in the afternoon sessions for the large first grade. This had a beneficial effect on the first grade, for I was able to observe on numerous occasions that the teacher was able to get more work done and the children seemed much happier. I noticed this particularly when either teacher was doing group work.

### *Parent Reactions*

Early in the course of the experimental programs with Fellows and with Teacher Assistants efforts were made to determine what impressions the parents of the pupils involved were receiving through their children. At first these efforts were indirect: the school principals were asked to report any parent reactions that came to their attention and to use any occasions they might have to sound out community opinion informally. Their replies revealed that little sentiment of any kind about the program had arisen among parents by that time. If the children discussed the presence of the Fellows in their classrooms when they came home from school, it apparently

To kindergarten children a little sand crab reveals life's wonders.

Exploring the mysteries of fourth-grade arithmetic can be a joyful experience for the prospective teacher.

caused no great excitement on the part of their parents. One principal reported, " I have had no unfavorable reports from parents. I believe they accept the situation as part of the school program." Another wrote, "Not many parents had much to say about the use of the helping teacher, but we can assume that if no adverse comments were made, everything met with their approval. It is my recollection that no mother, father, or anyone in the community made any comments either pro or con which were worthy of note."

Again in 1956–57 the principals of the schools where the Fellows were assigned were asked to report parent and community reactions they had observed. Their reports revealed continuing acceptance of the program.

In May, 1958, questionnaires were sent by the school principals to all parents of children in classrooms where Fellows were working. Although there were slight differences in forms, most of the items in the questionnaires used were common to all. The number of completed questionnaires returned was 79 per cent of the number of children enrolled. In addition to questions that could be answered by checking "Yes" or "No" there were questions that could be answered only by written statements. These were classified by qualified readers as shown under the questions reproduced below:

1. Does your child accept the idea of a teaching Fellow:
   Yes: 93 Uncertain: 0 No: 0 No answer: 1
2. Was there a pleasant relationship between the Fellow and the child?
   Yes: 90 Uncertain: 3 No: 0 No answer: 1
3. Did the fact that there was a teacher and a Fellow in the same room confuse your child?[8]
   Yes: 4 Uncertain: 0 No: 76 No answer: 0
4. Did the addition of a teaching Fellow take away from the status of a regular classroom teacher in the eyes of your child?
   Yes: 4 Uncertain: 3 No: 84 No answer: 3
5. What is your opinion of the use of teaching Fellows:
   Answers judged by readers to be:
   Favorable: 76 Uncertain: 3 Unfavorable: 2 No answer: 13
6. Are there any additional comments you wish to make about this type of situation:

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[8] This question was omitted in the version of the questionnaire received by one group of parents.

Answers judged by readers to be:
Favorable: 21 Uncertain: 2 Unfavorable: 2 No answer: 69

A sample consisting of the replies to questions 5 and 6 found on every fifth questionnaire, plus all replies listed by the readers as "unfavorable" (identified by asterisks) is presented below:

An excellent idea. Each child gets more attention.

I think they are a help too.

To speed up the work of the children with different groups and give them more attention.

In large classes they should be helpful in giving individual aid to students as well as assisting in duties to help teacher.

It's a great idea both from teacher's and children's standpoint.

It is an ideal practice teacher training, without complete loss of control of the class.

Fine. It increases the ratio of teachers to students.

*I don't like it because they are not strict enough.

Judging from the use the teacher was able to make of this added time in actual teaching, it was a great advantage to the pupil.

I think it is an excellent practice and feel we might well increase the use of a qualified teacher's assistant in Fairfield, under proper guidance of course.

I approve of a teaching fellow in the classroom.

*I don't think it is at all necessary to have an assistant if the teacher is doing her job.

Fine—as long as we ever have teachers such as the one my daughter has now.

I think it's a good idea and that it most likely gives the regular teacher more time for preparation.

I have no opinion to offer.

The idea is a fine one from the standpoint of giving a future teacher excellent background, and from the standpoint of "helping out" today's teachers.

If a child can receive additional help where it is needed, this is the simplest and most convenient method.

I think they should be used if the assistant is of concrete help, and if the regular teacher is willing to have her there.

I think it is a wonderful idea. First of all it takes some of the burden off the regular teacher. And second the children can receive much more individual attention.

*Drop the system and start teaching.

It must make individual attention more possible, which is very good for the best education possible.

The children take to young people. Young teachers are enthusiastic about new methods and extra subject matter for classes.

Shouldn't the Fellows be placed where there is the greatest need for individual attention?

Apparently during the early part of her stay the teaching fellow had some difficulty with discipline because my daughter commented several times that she was "crabby," which was only a temporary opinion, since there has been a complete reversal of thought.

If possible, let's have more of them.

*The best situation is a small class and an adequate salary for the teacher. Money should not be saved by hiring teacher aides at a small salary. I would rather see the regular teacher receive a higher salary—and keep classes small—so that each child can receive attention from a qualified teacher.

The assistant certainly benefits from this actual classroom experience. I think [the teacher] should be commended for allowing these students to spend an entire school year in her room.

We feel our son has learned more this year than previously. Whether or not this had anything to do with it we do not know. It could have been a strong influence.

# IV

# SUMMARY AND IMPLICATIONS

## A. Summary of Findings

### *The Problem*

The basic problems toward which the Fellow Program was directed are general educational problems which underlie all the experiments carried on by the Yale–Fairfield Study of Elementary Teaching. They arise from the consideration of how education, and in particular teaching, can be improved and the obstacles that must be overcome if this improvement is to be achieved. The need to attract more young people of high ability and other desirable personal characteristics to careers in the field of teaching is postulated at the outset as a necessary condition for the long-term improvement of teaching.

The Fellow Program provides an experimental approach to a preparation for teaching combined with periods of practical service in schools designed to overcome four major obstacles to the recruitment of capable youth for the teaching profession: (1) the general level of teacher salaries, (2) the unattractive nature of the typical preparation for teaching, (3) the nature of the teacher's work, burdened as it is with tedious chores and duties, and (4) the cost of preparation for teaching.

Although a few experiments that are similar in some respects have been reported in recent years, many questions remain unanswered. Among these are the following: Can extensive school experience in the form of responsible service as paid assistants to carefully selected teachers be combined successfully with professional preparation for teaching? Can students earn substantial amounts of money from work which contributes directly to their professional preparation for teaching? How will experienced and capable teachers utilize the services of such assistants? Would these teachers be able to extend the professional aspects of their work so as to meet greater teaching responsibilities? Would the needs and interests of pupils be sufficiently provided for under such an arrangement? What would be the quality of the preparation for teaching obtained by students in such a program? The purpose of the experiment reported here was to obtain answers to these questions.

### *Description of the Experiment*

Danbury State College provided the college program and environment that constituted the core of the Fellows' preparation for teaching. A revised schedule of courses adapted to an alternating sequence of study and work periods was devised so as to permit these students to complete their college requirements in four academic years and the three intervening summers. The Fellows were divided into two groups for the first three years of the program, the members of one group attending college one semester and changing places the following semester with the members of the other group, who had been serving as teacher assistants in Fairfield Schools. Each summer all members of both groups were enrolled in the summer session at Danbury State College. In the senior year all Fellows worked in schools the first semester, in which period the regular senior practice-teaching requirements of the college were satisfied, and they all attended college the second semester and were graduated with their classmates.

The work-experience part of the Fellow Program was provided by the Fairfield school system. Recognizing their responsibility for helping solve the problem of teacher recruitment, the Fairfield school authorities extended the use of their facilities and encouraged participation by their staff in the experimental programs of the Yale–Fairfield Study. A staff member, an elementary-school principal, was given a leave of absence to permit her to be appointed an Assistant Director of the Study, in which capacity she served as coordinator between the staff of the Study and Danbury State College and field supervisor of the various experimental projects.

The Fellows were assigned in pairs for their work experience, one member of each pair serving the first semester, the other the second. The cooperating teachers were selected on the basis of need for the additional service the Fellows could provide, ability to contribute to the process of preparation for teaching, and willingness to participate in the experiment. Generally the size of the class groups of the cooperating teachers was somewhat greater than average class size in Fairfield.

The criteria used in the selection of the Fellows were:

1. High ability as evidenced by intelligence test scores and academic standing in high school class
2. Liking for children and serious interest in teaching
3. Personality characteristics of friendliness, firmness, and originality
4. Good physical and mental health
5. Adequate preparation for college

A considerable number of qualified applicants were referred by high school guidance counselors, but only two of them were boys. Eight Fellows, all girls, were selected from this group. All were highly qualified as potential teachers, having excellent ability, background, and personality characteristics. In the second year of the program one of the original Fellows resigned to get married. She was replaced the following year by a classmate from Danbury State College who was able to meet the previously established qualifications.

A stipend of $1,000 per year for the Fellows was established in consideration of (1) the amount of time to be devoted to school service, (2) the requirement that summers be devoted to college work, and (3) the comparatively high level of ability and scholarly achievement of the Fellows, which would have entitled them to strong consideration for State scholarships. They devoted approximately thirty hours per week for approximately eighteen weeks each year to school service. The entire amount of the stipends was paid from the budget of the Yale–Fairfield Study, because the program was experimental and because the Fairfield school system was making other substantial contributions to the Study. On the basis of the value of the direct services provided by the Fellows, however, it is estimated that the school system could meet this expense without any general increase in operating costs.

### *Findings on Preparation for Teaching*

In the area of liberal education the Teacher Education Examination Program Tests of (1) English, (2) History, Literature, and Fine Arts, and (3) Mathematics and Science showed no significant difference between the Fellows and an equated control group at the end of the sophomore year. The Graduate Record Examination Tests of (1) Social Science, (2) Humanities, and (3) Natural Science showed no significant difference between Fellows, controls, or senior women in liberal arts colleges at the end of the senior year.

In the area of professional preparation the Teacher Education Examination Program Tests of (1) Foundations of Education, (2) Child Development and Educational Psychology, (3) Guidance and Measurement, (4) Methods, (5) Early Childhood Education, and (6) Elementary Education showed no significant difference between Fellows and controls at the end of the sophomore year. With the exception of Guidance and Measurement, these tests also failed to discriminate between juniors and seniors at Danbury State College. A specially devised test of teaching readiness, designed to reflect school experience, showed seniors to be distinctly superior to juniors in teaching readiness. The Fellows at the end of their junior year were equal to the control group of seniors on this test, showing, apparently, that their work experience had already provided them the degree of teaching readiness that seniors ordinarily obtain from practice teaching.

The Fellows received higher marks in their courses at Danbury State College than did the control group. Data with which to explain the difference are lacking.

The Fellows and control groups were found to be quite similar in respect to participation in extracurricular activities.

The Danbury faculty had a high opinion of the Fellows' general ability. They observed that the Fellows were much preoccupied with the problem of belonging in college. They thought that work experience had given the Fellows a more realistic understanding of the role of the teacher, but that their performance in courses in educational theory failed to show any great advantage from their practical experience. In the opinion of the Danbury faculty two semesters, one in the junior year and one in the senior year, is the optimum amount of off-campus work experience.

The Fellows themselves were unanimous in the opinion that the program could be improved by providing for full-time attendance at college in the freshman year. Some of their classmates thought the Fellows had missed much of college life, but others thought they had not. They were all sensitive, however, to the problem of their establishing the sense of belonging to the college. Not only the Fellows but also their classmates were strongly convinced that the work-experience program had great value as professional preparation.

All eight Fellows were graduated from Danbury State College in June 1959, were certified by the State of Connecticut, were appointed to teaching positions for the following year, and began teaching in September. Five of them accepted positions in Fairfield. One Fellow, the only one who was married, was granted a maternity leave in the spring of 1960; the rest planned to continue teaching and were recommended for renewal of contract in the systems employing them. All were considered highly satisfactory beginning teachers by their immediate superiors.

### *Findings on Service in a School System*

The professional role of the Fellow is derived from that of the teacher. The Fellows sometimes undertook direct responsibility for specific lessons, which they planned carefully and carried out under the teacher's general supervision. Approximately half the Fellows' time was used in ways that involved direct interaction with pupils—in group work, work with individual children, supervision both within and outside of the classroom, and miscellaneous activities with pupils. The remaining time was devoted to supporting tasks—planning, preparation of materials, evaluation and reporting, housekeeping and other miscellaneous activities. The fact that without a single exception the Fellows developed useful roles in the schools where they were assigned apparently means that if it is considered desirable that the role of the elementary teacher be modified by the delegation of certain tasks to appropriately selected helpers, such delegation is entirely feasible.

In order to determine whether the use of the Fellows' services enabled the experienced and capable cooperating teachers to concentrate more fully on their professional tasks and thus to meet greater teaching responsibilities a descriptive analysis of the teacher's role was first undertaken. It was found that many of the functions described by teachers as part of their daily work were of such character that they could readily be delegated to such well-qualified helpers as the Fellows proved to be. Many more difficult professional tasks remained, however, which the teachers did not choose to delegate. Although comparative data concerning the use of time by the same teacher both with and without the assistance of a Fellow were not available, the analysis of how the teachers assisted by Fellows distributed their time among major categories of work activity revealed some interesting patterns. On the average approximately 71 per cent of the working time of the cooperating teachers was devoted to activities involving direct contact with children. A minor share of the time of these teachers is devoted to miscellaneous clerical activities, such tasks as correcting papers, housekeeping, etc. Apparently, however, the cooperating teachers did not delegate enough of their supervisory duties to reduce the time they devote to such tasks to a minimum. They did devote substantial amounts of time to planning. A marked variety in the uses that individual teachers made of the Fellows' services was noted. According to their own subjective reports concerning their personal reactions to the experimental program, the cooperating teachers were well pleased with the Fellows' services as helpers and felt that their own professional work had been enhanced by the Fellow Program.

The effect of the Fellow Program on the progress of pupils in the Fairfield schools was assessed as accurately as possible by comparing the results of the regularly given achievement tests in classes to which the Fellows were assigned with similar test results in control groups, which were matched with the experimental groups as well as circumstances permitted. Further evaluation on the basis of the considered opinions of the cooperating teachers and school principals, elicited on several occasions as the program progressed, was used to supplement the test results. Parent reactions were also explicitly requested and were made a part of the total evaluation with respect to the impact of the Fellow Program on pupils.

The test results revealed that the experimental and control groups were closely matched on the basis of average initial achievement. The difference in average size of 4.5 pupils, the experimental groups being larger on the average, was statistically significant; this difference reflects the policy of assigning the Fellows to teachers who most needed them and indicates, in part, the added responsibility these teachers carried. No significant differences were found in average pupil gains on the various achievement tests. Small average differences, favoring the control groups in most instances, were found, but these were far less than would be required for either statistical or practical significance and cannot be attributed to the experiment. In general the test results showed very satisfactory pupil progress in both the experimental and the control groups.

The cooperating teachers gave thoughtful replies to the many evaluative questions to which they were asked to respond in writing on various occasions. One of the questions was: "From the point of view of effect on pupils' learning and their general welfare what do you consider to be the net gain or loss in general accomplishment under the experimental situation as compared with a normal teaching situation with a group of average size?" Such opinions as the following were received in reply: "There is more active participation generally"; "I can get to know the children better"; "Some areas have been more widely covered as far as subject matter is concerned"; "With a large group it is a wonderful help, but a smaller group gives the classroom teacher more time for reading groups." Of the many, many teacher comments a great majority reflected the belief that in general the program was beneficial to the children involved. The reactions from school principals were to the same effect. Parent reactions were overwhelmingly favorable to the Fellow Program.

## B. PRACTICAL CONSIDERATIONS IN THE IMPLEMENTATION OF THE PROGRAM

The final and most significant test of the value of the experimentation recorded in this report will be its impact on the practice of teacher education in the professional schools of the country. The next step probably should be continued experimentation with the plan by a few interested colleges and school systems designed in such a way as to bring into focus the problems involved and to work out such modifications of the plan as are necessary to minimize the difficulties to the point that the advantages of the plan may be secured without undue effort.

As a first step in the preparation of this final chapter of the report brief descriptions of the project were sent to a number of administrators in teacher-preparing institutions with the request that they formulate the questions they would raise if they were considering the inauguration of such a program in their own colleges. The questions they submitted have been classified, and in some instances restated, and used here as an outline for comments by the director of the study based upon his experience and observation. The major categories into which the questions fall are: (1) prospects for use; (2) financing the program; (3) certification problems; (4) relative value of the program; (5) effects on schools, colleges, and students; and (6) special resources needed.

### *1. Prospects for Use*

*a. What assurance have you that the internship plan will be acceptable to colleges and school systems?* We have no evidence that the plan will be widely accepted, if, indeed, it is accepted at all. The need for the recruitment and preparation of more and better teachers is recognized by all. This plan provides one way of achieving these ends while at the same time providing relief for overburdened teachers. The feasibility of the plan has been demonstrated and reported. Its chances for use are in the hands of the teachers colleges.

*b. Would it not be very difficult, if not impossible, to organize a large Teachers College on this plan?* Indeed it would and no such large scope use of the plan is anticipated. This is proposed as a supplement to other programs in the college. It is designed to tap a new source of teacher supply and to provide superior preparation for teaching for a few exceptionally well-qualified people who otherwise might never go into teaching at all. Small colleges for teachers or liberal arts colleges with small groups preparing for teaching might organize the entire program on the internship plan, but as a rule it should be thought of as an extension of the cooperative services of the college and the community schools to prospective teachers.

*c. Would it not be better to introduce the plan at the junior year of college rather than in the freshman year?* College juniors would probably be able to be of more direct assistance to teachers than freshmen are. They would have the advantage of uninterrupted schooling for two years, for whatever that is worth. The big objection to postponing the program, however, is that it would not improve recruitment for teaching, since the participants would be drawn from groups already committed to teaching. Furthermore, many good students drop out of college during the first two years. It appears that the holding power of the program during these years is very great. A cooperative program confined to the last two years of college should be thought of as an additional way to use the plan rather than as its replacement.

### 2. *Financing the Program*

*a. What stipends for students would be necessary?* The students in the Yale-Fairfield project received $1,000 a year. In addition, all college fees for the summer were paid by the Study. Their college work was done in a state college, hence fees were low. The amount was considered entirely adequate.

*b. Would it not be necessary to employ additional staff members to supervise the work of the students?* An Assistant Director of the Study assisted local supervisors and teachers in directing the work of the students. She also taught for the college a number of the off-campus courses taken by the students. If there is a sizeable group of participants a person representing both the college and the school system would be needed to coordinate the program. It should be pointed out, however, that the actual planning and directing of the work of the students was done by the teachers to whom they were assigned with the assistance of the principals of the schools. This would always be necessary if the students are to be of maximum help to the teachers while participating in their own worthwhile learning activities.

*c. Would these be additional expense to the cooperating college?* This would depend upon what is meant by "additional expense" and upon the college itself. If it is assumed that an additional student means additional expense, the answer would be "yes" just as it would be for any other students. If the numbers are such that additional classes must be organized, costs would be increased. The college should at least share the salary of the coordinator. It would seem, however, that state-supported colleges with a responsibility for teacher preparation should not consider the basic instructional costs for students in this program as "extras." The "extra expense" to the college would then be only the per capita cost over and above that for the student body as a whole and this "additional expense" could surely be justified by the product.

### *3. Certification*

*a. Would not certification be required for assistants especially if they receive salaries from public funds?* If actual responsible instruction were assigned to assistants, they would have to be certified by state authorities. Since most of their work is below the professional level, they are usually classified as clerks rather than as teachers. In the later years of their work their teaching assignments are considered to be on the same basis as directed practice and are carried on in the tutorial presence of the teacher. It would be necessary, of course, to work out agreements with all authorities involved but we know of no instance where assistants have been barred because they did not possess teaching certificates.

### *4. The Nature of Educational Experiences and the Relative Value of the Program*

Quite naturally many of the questions raised were concerned with the kind of field experiences provided for the students, their relationship to campus assignments, and the comparative advantages of the program over the more conventional types. Typical of these questions are:

*a. Is it possible to provide meaningful experiences for the students or must their participation be confined to doing chores?*

*b. If students are given opportunities for real teaching experiences, do they not encroach on the teacher's responsibilities?*

*c. What evidence is there that students will profit more by their study of college academic and professional courses because of their work in the schools?*

*d. Is not a combined program of study and school participation too heavy?* Such questions as these are fully treated in the body of the report and in some instances are summarized in the first section of this chapter. The questions point up dangers to be encountered and also focus attention on the advantages of the plan. It was necessary to organize the program so as to relate the parts to each other and to the whole. For instance, the experiences students were having in the schools provided material for and gave reality to the courses they were taking at the same time. The courses were thereby enriched and the time and energy of the students conserved.

*e. Were the professional courses taken "by extension" of as good quality as on-campus courses?* This question might just as well be asked in reverse order. Close cooperation between the campus teachers and the teachers in the schools was always maintained. There was never any doubt about the relative quality of the off-campus courses.

*f. If the participants in the Study have to be scheduled as a special group, are they not deprived of the value of association in classes with other students in the college?* This, of course, would be true. By the same token the regular students would be deprived of the contribution made to class activities by the participants. The problem involved here is discussed on page 52 of this report. Insofar as possible, the participants should be scheduled in regular classes in their campus study.

*g. With alternate term attendance in college how are essential course sequences provided?* This problem was encountered seriously only in mathematics, since most of the courses are organized on the semester plan without prerequisites. The ingenuity of the college officers in concentrating study in certain areas in the summer, and in providing an occasional special course, as well as in the skillful scheduling of individual students seemed to take care of the problem.

### 5. *Effects on Schools, College, and Students*

Here again many of the questions raised are specifically discussed in the text of this report. For example:

*a. What effect has the presence of teacher assistants on the teacher's assignment?*

*b. To make the plan feasible, are not larger classes necessitated?*

*c. Will not such a special program overtax the resources of the cooperating college?*

*d. Will not the students be deprived of the values of normal college life?*

Question *a* is discussed on pages 75–94 of this report and on pages 111–27 in the report on Teacher Assistants.[1] The presence of an assistant does alter the teacher's assignment, but generally speaking the change is favorable to the teacher and highly satisfactory to her.

Larger classes are not necessitated, but it is desirable and practical to assign students to teachers whose classes are normally larger than usual. This gives the larger classes the services of the best teachers, who at the same time, are best qualified to direct the activities of the assistant.

A discussion of the demands made upon the college will be found on pages 12–14. Much depends here upon local situations and especially upon the flexibility of college operation. The program should not be thought of as a questionable addition to a defensible program. If the authorities of both school and college are not convinced of the possibilities of the program and its legitimate claim on resources it should not be undertaken.

The reactions of faculty and students to question *d* will be found on pages 48–53. Opinion varies, but the degree to which students were able to participate actively in college life is to be remarked.

*e. Is it not easily possible for students to be exploited?* Possibly so. Safeguards are necessary. In our experience all participants were so eager to give the students a rich and adequate preparation for teaching that tendencies to exploit other participants were more frequently apparent.

*f. How could school systems justify cooperation in the plan?* In addition to improvement in recruitment and more effective teacher preparation the advantages to the cooperating school systems are numerous and significant. Inherent in the plan are to be found all of the benefits of the use of teacher assistants—more justifiable use of teacher competencies, more attention to individual pupils, more flexibility in organization and group teaching. Where large classes exist, such undesirable devices as double sessions may be avoided. Available classroom space may be deployed to better advantage. Cost of instruction, a matter always to be considered, can be kept to a minimum without jeopardizing the interests of students or placing teachers in an impossible position.

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[1] Yale–Fairfield Study of Elementary Teaching, *Teacher Assistants* (New Haven, Connecticut: The Study, 1958), pp. 111–27.

### *6. Special Resources Needed*

*a. What special resources are needed to carry out the program?* The special resources needed are largely spiritual rather than physical. First of all there must be a sincere desire on the part of schools and colleges to share responsibility for the recruitment and preparation of teachers, and a willingness to pool their resources in the accomplishment of their purposes. In most instances the needed resources are available. They need to be put to use. It would be safe to say that in most situations where good schools and good colleges are in close proximity the only added resource actually needed is a coordinator-teacher. It is necessary to have a person who can coordinate the program and who can teach some of the off-campus courses.

## C. SUPPLEMENTARY COMMENTS

Direct and implied recommendations appear throughout the report. No effort is made here to summarize them. A few additional points need special emphasis, however.

1. Eventually school systems will be compelled to assume more responsibility for teacher recruitment and preparation. The school is one of the very few big businesses which now relies almost wholly upon outsiders to provide its staff. It is important, therefore, to devise plans through which schools can participate directly in staff recruitment and preparation, and in so doing improve its own services.

2. Although practice teaching is almost universally required for certification, its value as it frequently operates is open to serious question. An internship running concurrently with undergraduate study provides opportunity to build a background for independent supervised teaching, which is needed if such teaching is to achieve its purposes.

3. The economical distribution of teachers' competencies is a basic problem with which the Yale–Fairfield Study of Elementary Teaching has been concerned. Teachers not only need the relief which assistants can provide so they can spread their talents more widely and more surely, but also have a significant contribution to

make to teacher education, which can be made by no one else. To use the competencies of excellent teachers wisely provision for their participation in teacher preparation must be included.

4. The most frequent and most severe, and probably the most justifiable, criticism of programs of teacher education is their inclusion of a multiplicity of overlapping, fragmentary, professional courses. The extent to which this situation is true is probably due to the lack of an appreciation on the part of curriculum-makers of the real contemporary needs of teachers, and to the fact that over the years curriculum-making has been a process of accretion without discriminating pruning. Once a subject gets into the curriculum, it is almost impossible to get it out. Many teachers testify that they never learned to teach until they had real experience in teaching. As most programs are now organized, teacher-preparing institutions should frankly admit that they do not really produce successful teachers. The best they can do is to put their students on the road to success. A plan of teacher education that provides for wide and responsible contact with schools in the process not only will spare children the losses sustained while the young teacher is learning to teach but also will make it possible to eliminate from formal courses those things which can be learned only on the job.

5. Many modifications in the plan here described can be devised. It should be recognized, however, that as plans are changed, objectives may also be changed. For example, it has been suggested that the plan be started at the junior year of the teachers college. This would have certain advantages but it would not provide for attracting new people into teaching, since teachers college juniors are already committed to teaching. If juniors in liberal arts colleges and graduates of junior colleges were employed and arrangements for programs of study were made for their senior college years, the factor of recruitment would be retained.

6. Finally, it should be remarked that in this project of the Yale–Fairfield Study of Elementary Teaching, relationships with the Fairfield schools and with the Danbury State College have been mutually satisfactory at all times. This spirit of cooperation can be attributed partly to the professional interest and personal integrity

of the participants and partly to the ability and understanding of the staff member who acted as coordinator of the program. During the time of the experiment she was a member of the school staff, on leave, and a temporary member of the college faculty. Much of the success of an enterprise of this kind is dependent upon personal relationships. It is strongly recommended that institutions undertaking similar programs give most careful consideration to this most important matter.

# APPENDIX A. REASONS FOR INTEREST GIVEN BY APPLICANTS FOR TEACHING FELLOWSHIPS

A teaching fellowship of this type enables the student to train for longer periods of time in a situation more typical of a natural teaching assignment than a laboratory school could offer. It gives the student a chance to apply what he has learned immediately rather than having to store up this knowledge until he is given a teaching position of his own. A fellowship offers more of a challenge to the student because of the amount of independence involved. A fellowship provides a better opportunity for the student to meet people from all walks of life.

My reasons for applying for one of the Yale-Fairfield Teaching Fellowships are: the unusual opportunities offered by the Fairfield System appeal to me as a future teacher; the program which combines classroom work-experience and college study seems an excellent approach to the best preparation for a teaching career; and the yearly stipend would enable me to assist my parents in meeting the financial obligations connected with acquiring the necessary education to become a teacher.

This Teaching Fellowship appeals to me because my ambition has always been to be an elementary school teacher but, due to financial conditions, this would be impossible unless through just such a program as this. I think that the experience obtained through this program would be far superior to that obtained through the regular State Teachers College program.

Working under this program will enable a Teaching Fellow to become better acquainted with the tasks and responsibilities of a teacher. At the present time I am undecided about what level of teaching I would like to major in. Teaching in classrooms of the various age levels would give me an opportunity to decide what grades I would enjoy teaching most.

The stipend would also be of great advantage financially. To be able to complete my schooling, it will be necessary for me to be partially self-supporting as I have only one parent.

Becoming a teacher has always been my ambition. With this in mind I have worked with children as much as possible for the last three years, achieved a good school record, and have joined in many extra activities for the experience of working with people. My interest in teaching has been with me ever since I can remember.

This teaching fellowship would offer an excellent opportunity to observe children and the different teaching methods early in my college life thus enabling me to secure greater experience and training for my chosen profession.

Another important factor to me is that the money I originally would spend for my four years college could go toward advanced studies which I otherwise could not afford.

I am eager to participate in this experiment because I feel that the practical experience which I would receive from the classroom work would better prepare me to become a teacher.

The challenge of a new method in teacher preparation interests me.

I am very much interested in this new type of education. I'm sure it will equip me to be a better teacher.

I am interested in applying for a Teaching Fellowship because I think it is a wonderful opportunity for anyone interested in elementary education. The Fellowship would make it possible to be practically independent and to take the burden of educational expenses from my parents. This new program is, in my opinion, one of the most effective ways of training new teachers.

All my life I have wanted to become a teacher because I am interested in small children. Mother has been teaching for many years. I visited her class, often, joined the Future Teachers of America and practiced teaching in kindergarten for two weeks. I have taken counselor training at camp and enjoyed working with the children. I think teaching is as nice a career as a girl can choose.

I think this program offers a wonderful opportunity to know about different classroom situations, while learning at the same time in college.

Last summer I worked at the Hillspoint Nursery School in Westport; I have taught Sunday School at the Saugatuck Congregational Church for the past three years; and through the Future Teachers Club at Staples, I have had the opportunity to "practice teach" in Saugatuck Elementary School in Westport. These three experiences plus my interest and love for children have been great incentives towards my final decision to become a teacher. I feel that with the aid of the Yale–Fairfield fellowship I would be able to devote the next four years to acquiring an excellent knowledge of the academic and practical methods of teaching.

I think that the Teaching Fellowship is a wonderful opportunity for any person interested in teaching. I feel this way, not only because I think it will greatly help the expenses of college, but also because it offers the opportunity of working with children as you learn.

The Teaching Fellow will have had actual classroom experience by the time she receives her diploma. The annual stipend allows the teaching fellow to earn a little money for herself while she is earning her diploma.

I have always been interested in teaching and feel that this teaching fellowship offers an excellent opportunity for receiving both training and experience within four years. This plan also gives the student a chance to discover whether he is truly suited for teaching.

This Teaching Fellowship—not only will aid me financially—but offers an opportunity to actually observe children in the classroom. The experience will show the procedures in the class, the teacher at work, and the development of the pupil, all of which are excellent in the preparation for teaching.

My main interest has always been elementary education. I feel that a Teaching Fellowship would not only aid me financially but would give me an opportunity to put my studies to actual use. I am confident that I can meet the requirements and will benefit greatly by such a plan.

I would like to apply for a Teaching Fellowship because I feel the personal contact with the children would be very beneficial to me. I've always wanted to teach and would like to be a part of this new experiment. Another appealing factor is the stipend which will greatly help me complete my education.

Because I have always wanted to become a teacher especially in the elementary schools, I am interested in applying for a teaching fellowship. I enjoy taking care of children, and I would like to work with them as a career.

The financial assistance would also aid me to obtain a B.S. degree in education.

I wish to be qualified to teach so my pupils will gain their greatest benefits through my teachings.

I feel that the Teaching Fellowship would be an excellent opportunity for me to receive practical preparation for my chosen career of teaching. It will give me the experience of being with children and watching someone, who is skilled in the profession, work with them.

The stipend which is offered with this program would greatly help me to defray the expenses of my college training.

It would give me an education while actually working in the field, which I believe is a very important step in the field of education. The Teaching Fellowship would also help me financially in attaining an education in teaching, a field in which I have always been interested.

I feel that the opportunities offered in this fellowship are wonderful for anyone who plans to teach. The experience I would gain and the people I would meet would be a great aid in the future.

Seeing how the different levels are taught could also help me make up my mind as to the level I would want to teach.

I have always been interested in teaching and would enjoy all phases of the work.

My primary reason for applying for this fellowship is the training and experience I will gain by working with teachers and children. I am sure it will help me to further my career and advancement in the teaching field. After obtaining my degree I wish to go into elementary administration. I feel that four years of actual teaching and the professional contacts involved will greatly improve my chance for professional advancement. Because of the encouragement of my counsellor and teachers, my school record, and my deep desire to make a career of education I believe that I could well profit from this experience.

The Teaching Fellowship offers experience in teaching as well as preparation for that profession.

# APPENDIX B. ACTIVITY RECORD FORM, FOR USE OF TEACHING FELLOWS AND ASSISTANTS

[On the original form more space was provided.]

Day of Week ..................

School .................. Fellow or Assistant.................................... Date..................

| | TIME | ACTIVITIES WITH PUPILS | OTHER ACTIVITIES |
|---|---|---|---|
| Before School | | | |
| Morning Session | | | |
| Noon Period | | | |
| Afternoon Session | | | |
| After School | | | |